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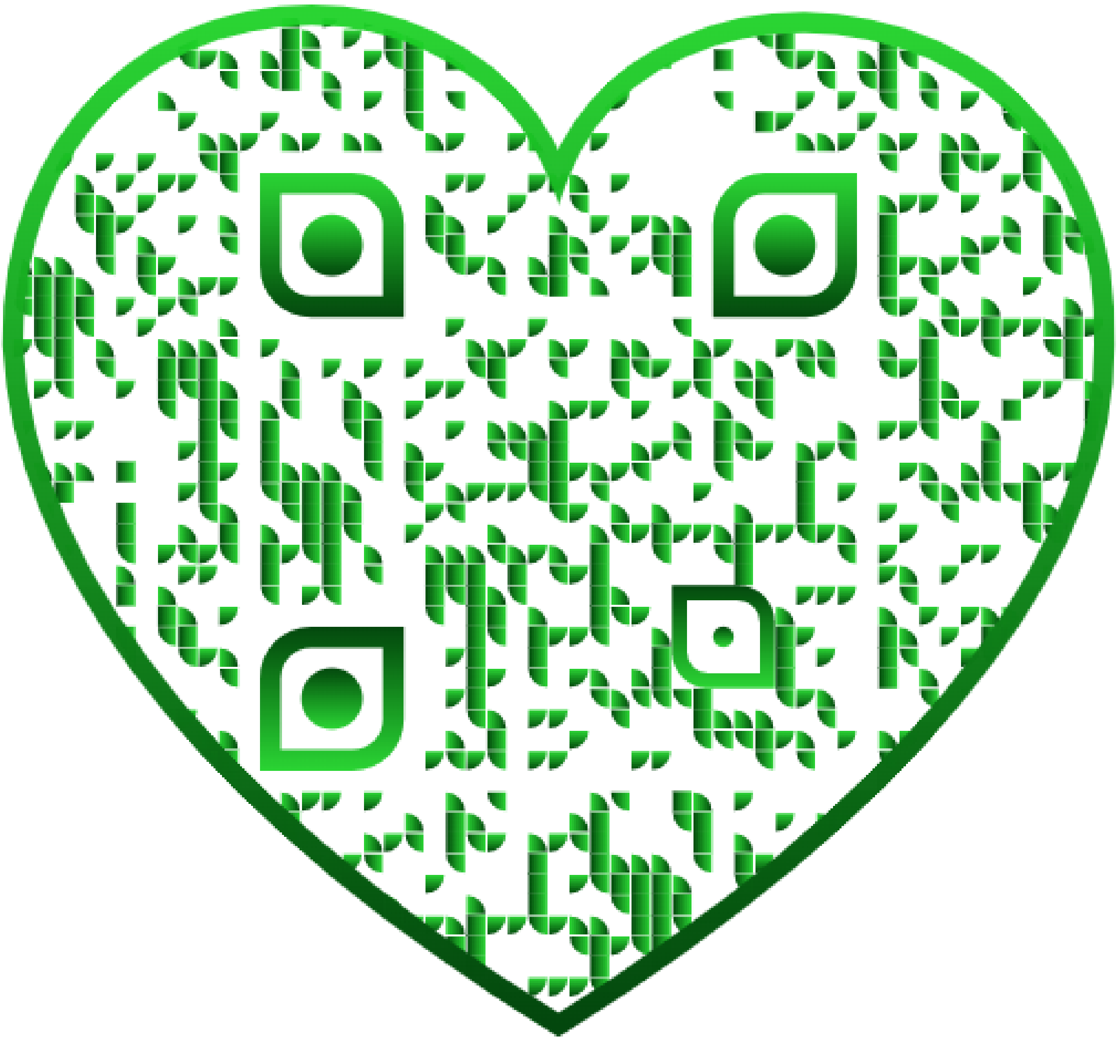

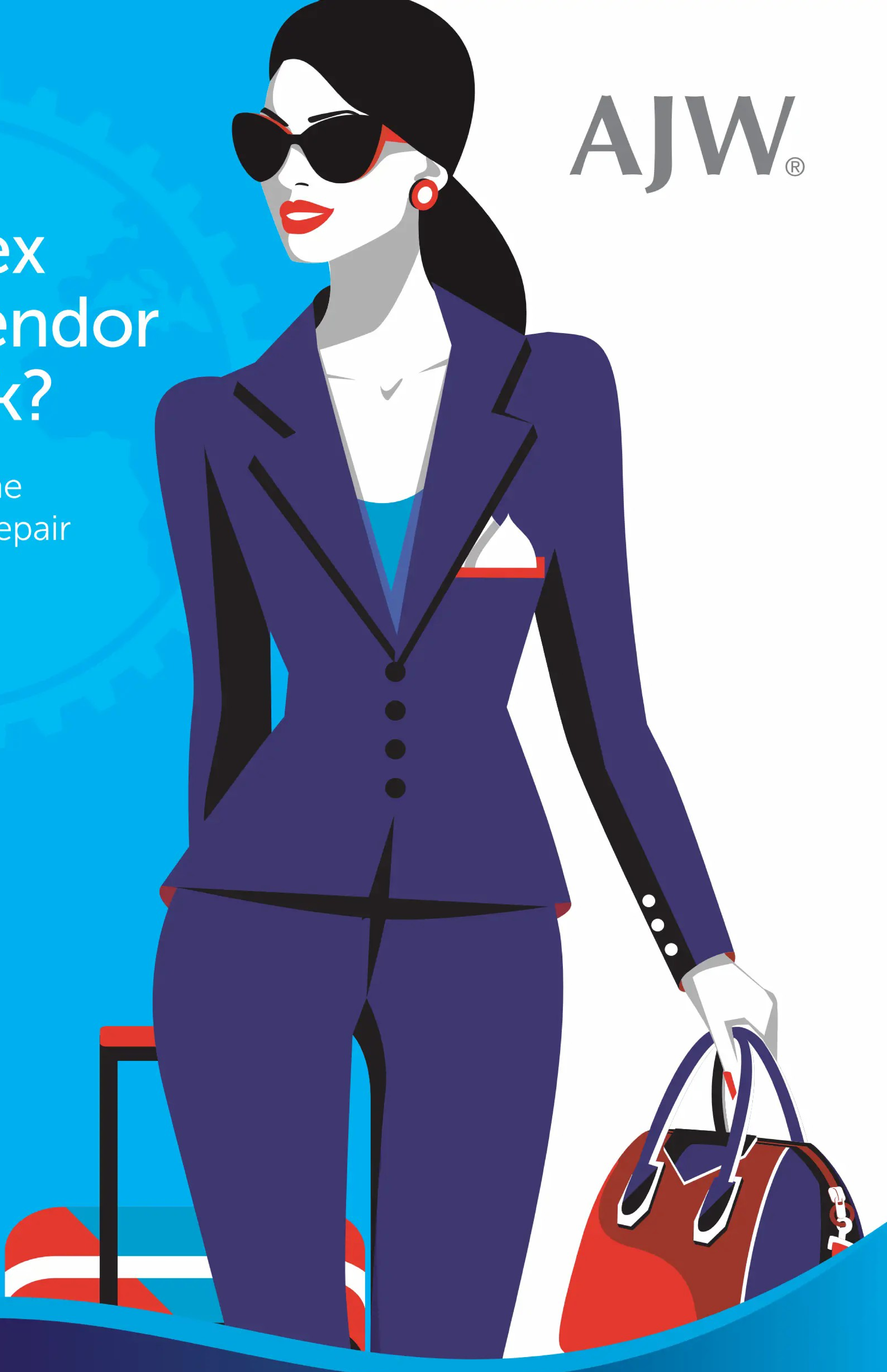

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Welcome

Hello and welcome to the December issue of *Airliner World*, incorporating *Airports of the World*.

Aviation has always been about connection – not just between cities and countries, but between people. It links families, fuels economies and brings the world a little closer together. And when part of that network falters, the effects ripple far beyond the airport, airline or aircraft involved.

The collapse of Eastern Airways last month, as this magazine went to press, was one such moment. For nearly three decades, the Humberside-based carrier quietly served as a lifeline for communities across the UK, connecting Aberdeen's oil workers, Teesside's business travellers and island residents from Sumburgh to the Isle of Man. Its closure leaves a tangible void, not only on route maps but in the lives of those who depended on it.

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FINNAIR

Yet amid the sadness, there was also a reminder of what makes aviation remarkable: its sense of solidarity. In the hours after Eastern's grounding, competitors and colleagues alike stepped forward. Among many instances, I saw Loganair and Ryanair offering fast-track applications for employment opportunities to displaced staff, while other airlines and even rail operators worked to re-accommodate stranded passengers. It was heartening to see that, even in an industry defined by fierce rivalry, compassion still cuts through – proving that connection is as much about people as it is about places.

Eastern's absence will be felt most acutely by those who relied on it. I hope that its PSO routes – such as its London-Newquay service – are re-allocated quickly because the services, by their very nature, are lifelines for the communities they connect. And to the dedicated staff who gave everything to keep the airline flying, I hope new opportunities come quickly and bring fresh challenges.

The collapse also leaves the UK with one fewer airline. We no longer have an abundance of truly independent carriers and I can't help but wonder how long it will be before we have none. Regional aviation makes sense: it connects communities to centres of economic growth and helps lift them up. If the government is serious about fostering economic development, it must support this sector, starting with reforms like ending the double taxation of Air Passenger Duty on domestic flights. A well-designed regional air service – like Blue Islands' new Leeds-Southampton link, which is due to start in March 2026 – is worth its weight in gold.

As this is our final issue of 2025, I want to take a moment to thank you for your continued support throughout the year. It's been a privilege to lead this esteemed magazine, and I hope we've helped you navigate the twists and turns of this dynamic industry – and perhaps even entertained you along the way.

Wherever you are in the world, I hope you enjoy this issue.

Thomas

Thomas Haynes
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INCORPORATING airports of the world

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COVER: ***Korean Air Boeing 747-8, HL7638 (c/n 60408), sporting its brand new livery, arriving into Los Angeles from Seoul on April 13*** PHOTO: "KOREAN AIR – BOLD NEW LIVERY" BY RON RAFFETY, VIA FLICKR, LICENSED UNDER CC BY-SA 2.0 (CREATIVECOMMONS.ORG/LICENSES/BY-SA/2.0)

BELOW: ***At the time of its collapse, Eastern Airways operated a 14-strong fleet comprising three ATR 72-600s, a pair of Embraer E170s, four E190s and five British Aerospace Jetstream 41s including G-MAJL (c/n 41087)*** AIRTEAMIMAGES.COM/RICHARD HUNT

Eastern
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Swiss enters A350 era

SWISS HAS entered a new era of long-haul operations with the arrival and entry into service of its first Airbus A350-900, marking a major milestone in the airline's ongoing fleet renewal programme.

The aircraft, HB-IFA (c/n 737) *Lausanne*, touched down at Zurich Airport on October 9 following a delivery flight from Airbus' factory at Toulouse/Blagnac. Greeted by hundreds of SWISS employees and aviation enthusiasts, the newcomer wears a special 'Wanderlust' livery celebrating Switzerland's landscapes and cultural diversity.

Less than three weeks later, on October 25, the A350 made its first flight from Zurich to Palma de Mallorca (LX 2152), carrying 233 passengers (including *Airliner World*). During the aircraft's short-haul familiarisation phase, it will also serve destinations including Prague, Hanover, Düsseldorf and Málaga, allowing SWISS pilots to complete their type-rating training before the aircraft begins intercontinental services. The first long-haul deployment is scheduled for November 20 and will see the widebody fly from Zurich to Boston.

SWISS plans to introduce ten A350-900s by 2031, with the first five due by the end of 2026. The new aircraft will gradually replace the airline's ageing four-strong fleet of Airbus A340-300s.

The A350 features the flag carrier's completely new SWISS Senses cabin, offering redesigned first, business, premium economy and economy class cabins. Passengers can expect more personal space, mood lighting, larger windows and quieter surroundings – the A350 being around 25% more fuel-efficient and twice as quiet as the Airbus A340s it replaces.

Airliner World was aboard the inaugural A350 flight to Palma de Mallorca and will feature a full report on the aircraft, cabin and flight experience in an upcoming issue. (Photo Javier Rodriguez)

Icelandair expedites 767 exit

ICELANDAIR WILL end its widebody passenger operations in 2026, accelerating the retirement of its Boeing 767-300ERs as part of a drive to curb continued financial losses. The airline had originally planned to keep the type until 2029 but will now withdraw its passenger 767s next year after what chief executive Bogi Nils Bogason described as "eight years of unsustainable financial performance".

The Reykjavik-based carrier currently operates five 767s – three on passenger services, one for Icelandair Cargo, and another leased to an Uzbekistani carrier Fly Khiva, along with a pair of Boeing 757-300s. The passenger 767s will be phased out during 2026, although Icelandair has not confirmed if the two cargo-configured aircraft will leave the fleet.

By next summer, the airline expects to field 35 aircraft for its own operation: 21 Boeing 737 MAXs, seven Airbus A321LRs and five Boeing 757-200s. The new A321LRs, three of which will arrive before next summer, will assume much of the long-haul flying currently undertaken by the 757s and 767s.

Icelandair will increasingly focus on point-to-point routes rather than connecting traffic through Keflavík, with a modest 2% capacity increase planned for 2026 despite a smaller fleet.

Game over for **PLAY**

ICELANDIC LOW-COST carrier PLAY ceased operations on September 29 after prolonged financial difficulties and a faltering attempt to overhaul its business model.

The Reykjavík-based airline said its performance had been "weaker than expected" in recent months, compounded by "negative media coverage" and "discontent among some employees due to changes in the company's strategy". Around 400 staff will lose their jobs, while thousands of passengers were left to reorganise travel plans.

PLAY's revised network strategy, introduced in late 2024, aimed to end loss-making transatlantic routes to Boston, Washington/Dulles and New York/Stewart in favour of point-to-point leisure flying within southern Europe. Only four of its ten Airbus A320neo-family aircraft remained dedicated to Icelandic operations, with the remaining six placed under a Maltese AOC and leased out under a new hybrid business model designed to generate off-season revenue.

The approach was intended to provide stability by reducing exposure to Iceland's pronounced seasonality, but the board later conceded the plan "could not deliver results sufficient to overcome the company's deep-rooted challenges that have built up over time. In hindsight, the new business plan should have been implemented earlier."

Founded in 2021, PLAY had sought to replicate Iceland's role as a low-cost transatlantic hub while avoiding the over-expansion that led to WOW air's demise. Its collapse, however, underlines the persistent difficulty of sustaining a small-scale Icelandic carrier amid volatile demand, thin margins, and intensifying competition from Icelandair and European budget rivals. (Photo Vincenzo Pace)

Lufthansa’s new flight plan

GERMAN GIANT Lufthansa Group plans to cut around 4,000 jobs worldwide by 2030 as part of a sweeping restructuring and efficiency drive announced during its Capital Markets Day in Munich. Most reductions will affect administrative roles in Germany, with the company citing duplication of work and the impact of artificial intelligence and digitalisation as key factors.

The job cuts form part of Lufthansa’s wider plan to streamline its organisational structure and bring its various airline brands – Lufthansa, SWISS, Austrian Airlines, Brussels Airlines, and ITA Airways – into closer alignment. The Group said the move would “clarify responsibilities, promote collaboration and speed up decision-making” while allowing commercial management across its various hub carriers to be co-ordinated more efficiently.

Lufthansa’s revised strategy is built around four strategic pillars: its Network Airlines, low-cost subsidiary Eurowings, maintenance arm Lufthansa Technik, and cargo division Lufthansa Cargo. Eurowings will continue its transformation as a budget-focused leisure airline, supported by 40 incoming Boeing 737 MAX 8 jets and growth from the newly spun-off Eurowings Holidays tour operator.

The Group also unveiled new financial goals for the period 2028-2030. It aims to increase profit margins to between 8 and 10%, achieve a strong return on the money it invests in the business, and generate more than €2.5bn in spare cash each year to help fund future projects and maintain financial stability.

Fleet modernisation and digital transformation remain central to the plan, with Lufthansa set to take delivery of more than 230 new aircraft by 2030 as it targets higher efficiency, improved profitability, and a stronger, more integrated group structure.

New wings for **Skybus**

ISLES OF Scilly Skybus has taken delivery of its first new aircraft in more than a decade – a completely rebuilt de Havilland Canada DHC-6-300 Twin Otter.

The 17-seat aircraft, registered G-NETS (c/n 299), arrived at Land’s End Airport on October 7 after a 4,000-mile ferry flight from Calgary, Canada, where it underwent an extensive three-year rebuild and modernisation by Rocky Mountain Aircraft. Although originally built nearly 55 years ago, the aircraft has been restored to near-new condition, featuring a full structural overhaul, upgraded systems, and a modern Garmin G600 flightdeck.

The airframe has had a colourful career. First delivered to Pakistan International Airlines in February 1971, it later served with Air Alpes in France, Sweden’s Syd-Aero, and Norway’s Coast Air. From the mid-1990s it flew in Canada with Northern Thunderbird Air and later Era Aviation in the United States, before joining Indonesia’s Aviastar in 2008. Withdrawn from service in 2017, it returned to Calgary in 2022 for its full rebuild.

The aircraft will begin operations in November 2025 under a multi-year agreement with Aurigny Air Services, operating in Aurigny colours between Alderney, Guernsey and Southampton. Alongside passenger duties, it will also support air ambulance, mail, freight and pet transport services.

Skybus continues to operate lifeline routes between the Isles of Scilly and Land’s End, Newquay and Exeter, with its growing Twin Otter fleet forming the backbone of these vital connections. (Photo Skybus)

Bankruptcy for Braathens’ **Airbus division**

SWEDISH CARRIER Braathens has filed for bankruptcy in the part of its business operating Airbus aircraft, following failed efforts to secure additional financing to support a controlled phase-out of the division.

The move affects Braathens International Airways AB (BIA) and Braathens Crew AB, which together employed around 200 staff. Both companies have now ceased operations, with employees covered by Sweden’s state wage guarantee. The bankruptcy filing does not affect Braathens’ turboprop operations, which will continue under the group’s other entities, including Braathens Regional Airlines AB and Braathens Regional Airways AB.

The decision follows an announcement in August that Braathens would wind down its Airbus A320 charter activities to focus instead on its growing fleet of ATR 72-600s. These turboprops are operated primarily on ACMI and regional contracts, and will remain in service “according to plan”, the company confirmed.

BIA was established in 2022 to operate Airbus aircraft on behalf of tour operators and other airlines. However, delays to aircraft deliveries, higher-than-expected start-up costs, and declining charter demand created mounting financial strain. Despite more than SEK300m (£24m) in investment since the pandemic, the division failed to achieve profitability. At the time of its bankruptcy, the fleet comprised two Airbus A319-112s and a pair of A320-214s.

in brief

Slovakian ACMI airline **AirExplore** added an extra Boeing 737-800 to its fleet on September 18. The 16-year-old jet, OM-PEX (c/n 29677), is an ex-Transavia France machine and was withdrawn from use by the carrier in September 2024. The addition brings AirExplore’s fleet to 14 737-800s, including two BCFs and three SF cargo variants.

Air Serbia has signed a two-year wet-lease agreement with **airBaltic**, under which the Latvian carrier will operate Airbus A220-300s on its behalf from November 1, 2025. Two aircraft will be deployed during the winter, increasing to four next summer, as part of the airlines’ expanded partnership which currently consists of a codeshare arrangement.

Avia Solutions Group has sold **SmartLynx Latvia** to its management and a Dutch investment fund as it begins consolidating its European operations. **SmartLynx Estonia** and **SmartLynx Malta** have been retained and will be merged and rebranded under a single AOC as part of plans to streamline the group’s airline structure. The move is part of a wider strategy to retain three European brands, although no additional details were provided.

KLM Royal Dutch Airlines expects to induct its first Airbus A350 into its fleet in “late 2026”, the airline said, as it announced the arrival of the first A350 flight simulator in the Netherlands (see page 100 for more details). The Dutch flag carrier will share a 50-strong 2023 Air France-KLM order for the A350 with stablemate **Air France**.

Lufthansa Group leisure carrier **Discover Airlines** plans to expand its fleet to 40 aircraft by mid-2028, from its current 30, including the introduction of four Airbus A350-900s from 2027. The A350s will join an all-A330 long-haul fleet, which will grow to 16 A330-300s by 2026, alongside 20 Airbus A320s for short- and medium-haul routes. The airline plans to use the A350’s longer range to open routes to South and Central America, southern Africa, and Southeast Asia.

British Airways took delivery of its 20th Airbus A321neo in early October. The flag carrier accepted G-TNEJ (c/n 12753), on October 9 with the jet entering service three days later. Its first A321neo, G-NEOR (c/n 8526), arrived in November 2018.

Olympic Air's ATR arrival

OLYMPIC AIR has taken delivery of a new ATR 72-600, continuing its steady fleet expansion under parent company AEGEAN Airlines. The aircraft – registered SX-OBU (c/n 1728) – was handed over by ATR in Toulouse on October 3 and joins Olympic Air's 17-strong turboprop fleet, which includes 12 ATR 72-600s, three ATR 42-600s and a pair of de Havilland Canada DHC-8-102 Dash 8 100s.

As part of the same announcement, AEGEAN confirmed a direct order for two additional ATR 72-600s, scheduled for delivery in December 2026.

Michalis Kouveliotis, deputy chief executive officer of AEGEAN Airlines, said: "We are pleased to welcome the new ATR 72-600 to our fleet and anticipate the arrival of two more aircraft by December 2026. These additions reflect AEGEAN's and Olympic Air's ongoing commitment to fleet renewal, operational efficiency and sustainability."

Operating one of Europe's most modern turboprop fleets, Olympic Air continues to play a vital role in linking Greece's islands and smaller regional airports to Athens and other mainland hubs. (Photo ATR)

Croatia Airlines takes first A220-100

FLAG CARRIER Croatia Airlines has taken delivery of its first Airbus A220-100, marking another milestone in the carrier's ambitious fleet renewal programme. The aircraft, 9A-CAO (c/n 50087) *Dubrovnik*, arrived in Zagreb directly from Airbus' Mirabel facility in Canada on September 30 and is the seventh of 15 new A220s set to join the airline by 2027. It is also the first of the smaller A220-100 variant in Croatia Airlines' fleet, complementing the six larger A220-300s already in service.

The new jet seats 127 passengers, making Croatia Airlines only the fifth airline worldwide to operate the shorter variant, and the first to do so with the type's highest-capacity cabin configuration.

The four other operators, Delta Air Lines, ITA Airways, Bulgaria Air, and SWISS, configure their A220-100 fleets with 109, 125, 118, and 125 seats, respectively.

Jasmin Bajić, chief executive officer of Croatia Airlines, said the delivery represented an important step in the company's modernisation drive: "We are proud to have become the fifth airline in the world to operate an Airbus A220-100, with the special distinction that our newest aircraft has the highest seating capacity of its type in service."

Croatia Airlines' fleet renewal project represents the largest strategic investment in the carrier's history. By 2027, its fleet will comprise 13 A220-300s and two A220-100s, replacing older Dash 8s and A319/320s. (Photo Croatia Airlines)

Seat cover checks ground **Finnair A321s**

FINNAIR TEMPORARILY withdrew eight of its 15 Airbus A321s from service in October having discovered that the impact of washing on the fire protection of their seat covers had not been properly verified by the manufacturer. The airline replaced around 1,700 covers across these aircraft, all of which have since returned to service.

The issue came to light on October 13, when the manufacturer of the original covers informed Finnair that the flame-retardant properties of the fabric might not meet certification standards once laundered. The covers had been produced by a "long-standing Finnair partner" based on specifications from the seat manufacturer and were washed in line with that guidance. Seats are typically cleaned every two years.

Finnair immediately grounded the eight aircraft, a precautionary move that resulted in around 70 flight cancellations and disrupted travel for roughly 11,000 passengers.

Replacement seat covers from multiple suppliers were quickly sourced and installed, enabling all eight aircraft to return to service by the end of October. During the grounding, Finnair leased two aircraft with crew to help maintain its European schedule.

Finnair operates 15 Airbus A321s, the largest aircraft type in its short- and medium-haul fleet. (Photo Vincenzo Pace)

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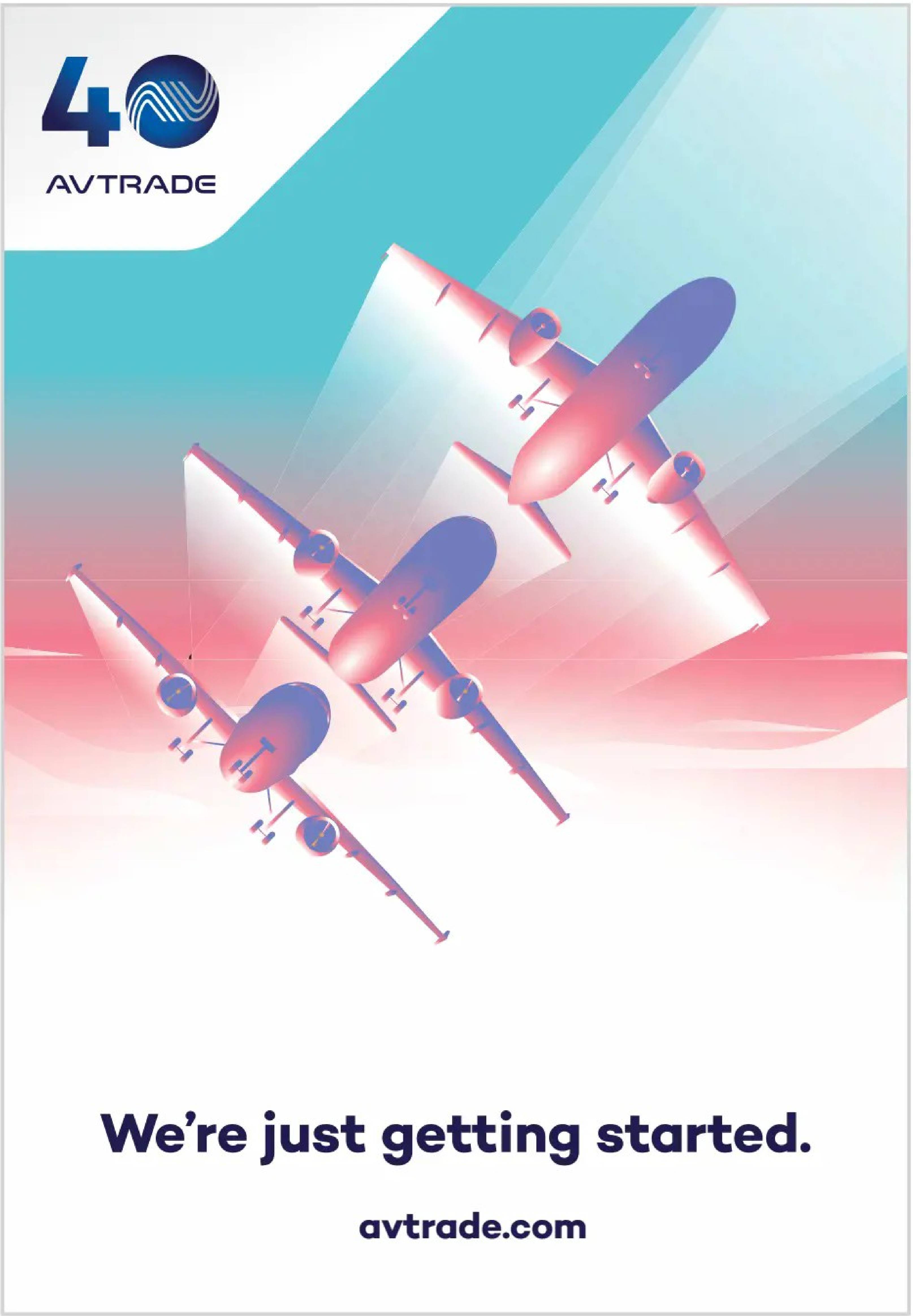

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Peter Foster steps down as **Air Astana CEO**

AFTER 20 years at the helm, Peter Foster is to step down as CEO of Air Astana at the end of March 2026. Foster – who will be succeeded by the airline's current chief financial officer, Ibrahim Canliel – will remain a senior adviser to the board of directors after his retirement.

Canliel has worked for the airline since 2003, starting in senior commercial roles before moving to the CFO role in 2017. The chairman of the board of directors, Nurlan Zhakupov, said: "His contribution has been immense and he brings with him great experience of both the group and of the airline industry. The board has the fullest confidence that he will guide the company to continued growth and success."

Since taking the CEO role in 2005, Foster has guided the airline, launched in 2002, to become Central Asia and the Caucasus region's largest airline group by revenue and fleet size, with 61 aircraft, including its low-fare carrier, FlyArystan.

Zhakupov thanked Foster for his "outstanding achievement in guiding the company for 20 years, from its post-start-up phase to its position today as Kazakhstan and Central Asia's leading airline, and a respected airline brand throughout the global aviation industry."

Meanwhile, the Almaty-based airline is also expanding its services to the Middle East and Asia. In September, the carrier resumed twice-weekly services from Almaty to Jeddah and weekly services from Shymkent to Jeddah. From late October, twice-weekly services between Almaty and Medina will resume, along with weekly flights from Shymkent to Medina. Flights from Astana to Jeddah and Medina will operate on an alternating two-week schedule, along with new services linking Aktau to both Jeddah and Medina, also operating on an alternating two-week schedule. Flights between Almaty and Dubai will increase from seven to 12 per week, while Astana-Dubai flights will increase from seven to ten per week.

On the flag carrier's Asian network, flights between Almaty and Male will initially be three times a week, increasing to five during peak holiday periods. Almaty to Phu Quoc in Vietnam will initially operate five times per week, rising to daily flights in December, while services between Astana and Phu Quoc will operate three times a week. Frequencies to Thailand will also be boosted, with Almaty to Bangkok increasing from four to seven flights per week, and the same for Almaty to Phuket. (Photo Air Astana)

Testing under way for first **Russian-built airbridge**

THE FIRST domestically-built airbridge for passenger aircraft has been displayed by the Russian company Vysokotochnye Kompleksy, part of Rostec. The new design can accommodate all categories of commercial aircraft, from regional airliners to widebodied jets; due to the electrohydraulic and electromechanical drive systems that allow the bridge to adapt its length, height and configuration during the docking process.

The construction of the airbridge forms part of the country's move towards self-sufficiency and away from reliance on Western-built aircraft and infrastructure. Previous airbridges in the country have relied on imports from China and Spain.

Preliminary testing, carried out under various climate and technical scenarios, has now been completed. Rostec reported that the bridge performed well, demonstrating reliability, precision and advanced safety standards in line with international standards set by ICAO and EASA.

Rostec executive director Oleg Yevtushenko said the device "will make boarding any aircraft comfortable and convenient for passengers, which is especially important for regions with a cold climate". Yevtushenko added: "The 'sleeves' will be produced entirely from Russian components and will allow import substitution of foreign equipment."

Aeroflot to strip aircraft for spares

AEROFLOT IS said to be planning to strip eight Boeing freighters to ensure the airworthiness of its passenger fleet, according to the Russian news service *Kommersant*. The aircraft, reported to be six 737-800BCFs and a pair of 747-400Fs, are currently owned by the Volga-Dnepr Group. The deal is valued at around $130m.

If confirmed, the 737s, previously operated by Volga's domestic carrier Atran, are likely to be transferred to low-cost subsidiary Pobeda. The 747s, previously operated by AirBridgeCargo, will go to Rossiya Russian Airlines. Volga-Dnepr is said to have finalised an insurance settlement with Irish lessor AerCap for the aircraft.

The deal is not said to affect the possible sale of the troubled Volga-Dnepr Group to Yevgeny Solodilin, the former CEO of Red Wings Airlines and Zhukovsky Airport. *Kommersant* noted that the two parties have signed an initial agreement, which would cover the purchase of airlines Volga-Dnepr, Atran and AirBridgeCargo, as well as Volga-Dnepr Technics and Volga-Dnepr Engineering. (Photo AirTeamImages.com/Jan Severijns)

Il-114-300 enters final test phase

THE ILYUSHIN Il-114-300 has undergone a series of test flights from Gorno-Altaisk airport, in the Altai Republic, which borders Mongolia and Kazakhstan. The airport is located in the mountainous region of southern Siberia and has been used to evaluate the aircraft's operating capabilities in a variety of environments.

As part of the testing, one of the prototype turboprops also operated several international flights, including an intermediate stop at the Krayniy airfield in the city of Baikonur, the site used for Russian space exploration.

Ilyushin managing director Daniil Brenerman said that once the tests have concluded, the aircraft will be returned to its base to complete the certification programme. The 66-seat airliner, powered by two TV7-117ST-01 engines manufactured by the United Engine Corporation, has been designed to replace the ageing AN-24 and other Western-built aircraft on domestic routes across Russia.

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Turkish delights in Dreamliner deal

TURKISH AIRLINES has confirmed a long-anticipated order for 50 Boeing 787 Dreamliners, comprising 35 787-9s and 15 787-10s, with options for 25 more. This marks the flag carrier's first commitment to the higher-capacity 787-10. Engine selection remains undecided, with negotiations ongoing between GE Aerospace and Rolls-Royce.

Deliveries will begin in 2029 and run through to 2034. The airline said the new aircraft will boost long-haul connectivity and support Turkey's tourism sector. Boeing highlighted the 787-10's added passenger and cargo capacity and fuel efficiency on high-demand routes.

In addition, Turkish Airlines plans to purchase 100 Boeing 737 MAXs – split between the -8 and -10 variants – with options for 50 more. A firm agreement awaits final negotiations with CFM International over LEAP-1B engines.

The airline's chairman Ahmet Bolat described the deal as a milestone aligned with the airline's 2033 Vision to expand its fleet to 800 aircraft. Turkish Airlines currently operates a roster of just over 500 aircraft and serves more than 350 destinations across 130 countries.

The announcement followed Prime Minister Recep Tayyip Erdoğan's visit to the White House, echoing a pattern of Boeing orders linked to diplomatic engagements. Similar deals were struck with South Korea, Japan, and Indonesia in recent months. (Photo Boeing)

TURKISH AIRLINES
TURKISH AIRLINES

Moroccan MAX migration

MOST OF Qatar Airways' nine-strong Boeing 737 MAX 8 fleet are likely to have found a new home with Royal Air Maroc after lessor Avolon agreed to lease six examples to the flag carrier.

The first two jets, CN-RHI (c/n 62878) and CN-RHJ (c/n 43342), arrived in Casablanca on September 25 and October 10, respectively. The remainder are due to arrive through 2025 and 2026.

The storied 737s were originally destined for Russian carrier S7 Airlines, but following Russia's full-scale invasion of Ukraine in 2022 and the resulting sanctions, delivery was cancelled. Qatar Airways – which operates an all-Airbus narrowbody roster – picked up the jets in 2023 during its dispute with Airbus over the paint degradation on its A350 fleet. They were subsequently wet-leased to Indian low-cost carrier IndiGo between August 2024 and August 2025, but had been idle since then.

Abdelhamid Addou, chairman and chief executive officer, Royal Air Maroc commented: "This agreement with Avolon represents a significant milestone in the execution of our ten-year 'Growth Program'. The arrival of these six Boeing 737-8 MAX aircraft not only increases our operational capacity but also accelerates our transformation from a regional carrier into a global connector linking Africa with the rest of the world."

Royal Air Maroc currently operates a 60-strong fleet comprising six ATR 72s, 28 737-800s, ten 737 MAX 8s, one 767-300, five 787-8s, six 787-9s, and four Embraer E190s.

Neo arrival for Air Arabia

SHARJAH-BASED LOW-COST carrier Air Arabia has received its first Airbus A320neo, marking the start of deliveries from its 2019 order for 120 A320 Family aircraft. The handover of A6-ARA (c/n 12772) occurred on September 25.

The order includes 73 A320neo, 27 A321neo, and 20 A321XLR aircraft, reinforcing Air Arabia's long-term strategy to expand its network. The new aircraft joins the carrier's existing fleet of 83 Airbus A320 Family jets.

Powered by CFM International LEAP-1A engines, the A320neo promises a 20% reduction in fuel burn and CO_2 emissions compared to the A320ceo. The aircraft is configured in a single-class layout with 174 seats and offers a range of up to six hours.

The A320neo entered service on October 1, 2025, with its inaugural flight between Sharjah and Bangkok. It features Air Arabia's "SkyTime" in-flight streaming and "SkyCafe" onboard menu.

This delivery is part of Air Arabia's second direct order with Airbus, following its 2007 purchase of 49 A320ceos. The new aircraft will support operations across the airline's multi-hub network, including bases in the UAE, Morocco, Egypt, and Pakistan.

The airline's chairman Sheikh Abdullah Bin Mohammed Al Thani said the delivery marks a key step in the airline's growth, adding: "We remain committed to operational efficiency, innovation, and sustainability while ensuring comfort and value for our passengers."

Since the first delivery, a second A320neo, A6-ARB (c/n 12790), was handed over on October 2, before entering service a week later. (Photo Eurospot)

Gulf Air returns stateside

GULF AIR has reinstated direct services between Bahrain and New York/JFK, marking the Bahraini flag carrier's return to the United States after a hiatus of 28 years.

The inaugural flight, GF91, departed Bahrain International Airport on October 1, operated by Boeing 787-9 Dreamliner, A9C-FG (c/n 39986). The 13-hour service touched down in New York to a formal reception attended by senior officials and dignitaries from both nations, underscoring the political and economic significance of the relaunch.

Gulf Air will operate three weekly flights between Bahrain and New York, connecting through JFK to a range of onward destinations across the Americas. The return sector, GF90, completes the 11-hour journey back to the Bahraini capital Manama.

According to Flightradar24, Gulf Air's last flights to the United States were in 1997, operating the Bahrain-Larnaca-New York/JFK route and vice versa using an Airbus A340-300.

Meanwhile, ex-airBaltic CEO Martin Gauss was appointed as Gulf Air's chief executive officer from November 4, following his departure from the Latvian flag carrier in April.

Emirates to acquire another A380

UAE FLAG carrier Emirates has agreed to purchase Airbus A380-861, A6-EOO (c/n 190), from aircraft investment firm Stratos at the end of its lease term in 2027. The aircraft has been managed by Stratos on behalf of Asia-based institutional investors since the lease was structured and aircraft delivered in September 2015.

The forward sale supports Emirates' long-term fleet strategy, ensuring continued operation of the aircraft beyond its lease expiry.

"We are delighted to have worked with Emirates to support their long-term fleet requirements," said Cian O'Shea, marketing director at Stratos.

The airline has previously made several similar agreements with its lessors including with Guernsey-based Doric Nimrod Air Three, from which it agreed to purchase four A380s – for a total of £132m – before the end of 2025, as their leases expired.

Out of a fleet of 118 A380s, according to ch-aviation data, Emirates owns 70 examples with the remaining 48 on financial and operating leases. (Photo Emirates)

Airlinks adds **E2s**

SOUTH AFRICAN regional operator Airlink has taken delivery of its first three of ten Embraer E195-E2s. Over an 11-day period between September 22 and October 3, the Johannesburg-based firm accepted ZS-ARF (c/n 19020190), ZS-BJW (c/n 19020192), and ZS-LKA (c/n 19020200).

The new aircraft, which can seat up to 136 passengers, will provide the airline with increased capacity on high-density routes such as Johannesburg-Cape Town, while the type's additional range will open up new route opportunities across sub-Saharan Africa.

ZS-ARF and ZS-BJW are registered in honour of Airlink co-founders Roger Arnold Foster and Barrie James Webb, respectively. The ten E2s are being leased from Fort Lauderdale-based Azorra in an agreement signed in August.

The all-Embraer operator currently holds a 72-strong roster comprising 16 ERJ135s, 11 ERJ140s, three E170s, four E175s, 29 E190s, six E195s, and now a trio of E195-E2s.

Soft launch for **Riyadh Air**

SAUDI ARABIA'S newest carrier, Riyadh Air, has marked a major milestone on its path to full commercial service with the start of its first daily operations between Riyadh and London/Heathrow. The flights, which began on October 26, form part of a series of proving services designed to prepare the state-owned airline for its official launch.

The services operate under flight numbers RX401 and RX402, departing Riyadh at 0315hrs and arriving at Heathrow at 0730hrs local time. The return leg leaves London at 0930, touching down in the Saudi capital at 1915. Initially limited to invited guests and Riyadh Air employees, the flights aim to test systems, crew procedures and ground handling arrangements as part of the carrier's "Pathway to Perfect" programme of operational validation.

Operations are being conducted using Boeing 787-9, HZ-RXX (c/n 38892) *Jamila*, a jet leased from Oman Air. Riyadh Air confirmed that further flights – including a new service to Dubai – will follow in the coming weeks, as the airline refines its operations ahead of the arrival of its own factory-fresh Boeing 787-9s. Additional routes are expected to be unveiled for the winter 2025 and summer 2026 seasons.

Chief executive Tony Douglas described the launch as "a tangible realisation of a vision to connect Saudi Arabia to the world," aligning with the country's Vision 2030 economic diversification strategy. "This rigorous flight programme on *Jamila* allows us to fine-tune every detail, ensuring a seamless, reliable and world-class experience," he said. "We are now incredibly close to full operations." (Photo Vincenzo Pace)

in brief

Air Côte d'Ivoire has begun long-haul operations for the first time following the delivery of its maiden Airbus A330-900 in September. The flag carrier launched services to Paris/Charles de Gaulle on October 15 using TU-TRG (c/n 2086) on the six-hour rotation from its hub at Abidjan/Port Bouët. A second A330neo is expected to be delivered imminently which will enable to carrier to bolster its long-haul network across Europe, the Middle East and North America.

Luton-based low-cost carrier **easyJet** will establish a new three-aircraft base in Marrakech, Morocco, starting in spring next year – marking its first operational base in Africa. The airline also announced four new routes to Morocco for summer 2026, including services from Hamburg, Lille, and Strasbourg to Marrakech, and Geneva to Tangier. These additions will bring easyJet's total number of Moroccan routes to 46.

Nigeria's **Air Peace** is set to receive its first Boeing 737-700, leased from AerCap. The aircraft, currently registered EI-HRN (c/n 32674), was recently repainted in the airline's livery at Belo Horizonte Tancredo Neves Airport in Brazil and ferried to Shannon, Ireland, with a stopover in Espargos, Cape Verde. The jet was previously in service with Aerolineas Argentinas between June 2009 and November 2024 when it was withdrawn from use.

Abu Dhabi-based **Etihad Airways** has inaugurated flights to Ethiopia following the launch of daily services to Addis Ababa on October 9. Under a codeshare deal with Ethiopian Airlines signed in June, Etihad is co-ordinating schedules and developing routes to the African country. The airline is using an Airbus A320ceo for its Addis Ababa link, while Ethiopian is deploying the newer Boeing 737 MAX 8.

TAAG Angola Airlines has agreed a sale and leaseback deal with Avolon for its second newly delivered Boeing 787-9 Dreamliner, D2-TER (c/n 66913), which arrived in Luanda from Seattle at the end of September. Its first 787-9, D2-TEQ (c/n 66877), was financed in a similar deal with AerCap and was delivered in January. D2-TER was initially due for TUI Airways but wasn't taken up.

WestJet's new equity stakeholders

DELTA AIR Lines, Air France-KLM and Korean Air (see page 104) have finalised the purchase of a 25% stake in Canada's WestJet from its current owner, the Canadian private equity firm Onex Partners.

Delta will take a 15% minority equity stake, and Korean will hold the remaining 10%. Delta will then transfer 2.3% of its stake to joint venture partner Air France-KLM. The deal sees Korean Air's CEO, Walter Cho, join Air France-KLM's boss, Ben Smith, on the WestJet board.

Alexis von Hoensbroech, CEO of the WestJet Group, said: "This closing marks a milestone in our airline partnerships, building on existing relationships and reflecting confidence in WestJet's strategy, performance, and people. We are proud to welcome our new airline shareholders and look forward to further strengthening our partnerships with their airlines to create long-term value for [our] guests."

Korean Air added that the investment underscored "the growing importance of the Canadian aviation market, which was valued at $33bn in 2024 and ranked among the world's top ten, with double-digit growth since 2019."

Delta and Korean have been codeshare partners with WestJet for many years. Along with Air France-KLM, the new owners are all members of the SkyTeam alliance. WestJet has long sought to form joint ventures on both transpacific and transatlantic flights. (Photo Vincenzo Pace)

Spirit outlines latest **restructuring**

ULTRA LOW-COST carrier Spirit Airlines has announced plans to shrink its fleet by almost 100 aircraft. The Florida-based airline filed a motion with the US Bankruptcy Court for the Southern District of New York on October 21 to reject the leases of 67 Airbus jets. It currently boasts a fleet of 214 aircraft. Agreements have been reached with several lessors, including AerCap Ireland. The agreement with the Irish leasing company includes the rejection of 27 aircraft, a $150m payment to Spirit, and the resolution of "all claims and disputes" between the two.

Dave Davis, the airline's president and CEO, said: "We are pleased to have reached another significant milestone in our restructuring, which represents continued progress toward securing a successful future for Spirit."

Along with the fleet reduction, Spirit will also furlough an additional 365 pilots and downgrade the status of 170 others during the first quarter of 2026. This is in an attempt to save around $100m in annual spending on its flight deck employees. Meanwhile, some 1,800 flight attendants will also be furloughed.

The ULCC has also announced plans to exit several markets, including Hartford, Connecticut, and Minneapolis, Minnesota. Around 40 routes will be slashed from its network as part of the restructuring plan.

Alaska IT outage grounds flights

ALASKA AIRLINES has been forced to ground all flights for the second time in less than six months after an IT outage. The failure, which took place at the airline's primary data centre, impacted several of its key systems. The incident began mid-afternoon on Thursday, October 23.

The airline, along with its regional subsidiary Horizon Air, cancelled over 400 flights. Hawaiian Airlines was unaffected. Alaska Airlines said that around 49,000 passengers were affected over two days as it attempted to "normalise operations safely and as quickly as possible." The Seattle-based carrier currently serves 140 destinations worldwide, including 37 states and 12 countries.

In July, Alaska Airlines and Horizon Air grounded flights for three hours due to a "significant IT outage." It later said that the isolated occurrence was unrelated to cybersecurity incidents that had affected WestJet and Hawaiian. (Photo Vincenzo Pace)

The return of **Pan Am?**

COULD ONE of the world's most iconic airlines be returning to the skies? On October 9, 2025, the aviation merchant bank and consulting firm AVi8 Air Capital, along with Pan American Global Holdings, which owns the rights to the Pan Am brand, announced that they had finally completed their business plan, which could see Pan Am relaunched as a scheduled airline.

Following this, the team has now formally started the certification process with the US Federal Aviation Administration (FAA).

The two teams have been working since June to evaluate the prospects of a "new" Pan Am. If approved, the plan is to launch operations from Miami, the historical and spiritual home of the original Pan Am, with a fleet of Airbus aircraft.

In a statement, the company said: "The relaunch aims to revive the Pan Am legacy for a new generation of travellers. It will combine modern technology and efficiency with the airline's original spirit of innovation, style, and service."

AVi8 Air Capital specialises in aviation finance, strategy, and airline management. Over the past four decades, the company has helped launch two US regional airlines, led the privatisation of a major international carrier, guided certification for two US Part 121 airlines, and developed a $2bn aircraft leasing platform for a global investment bank.

Pan Am collapsed in 1991 after years of financial struggles. However, the name and brand have remained relevant in popular culture. Earlier this year, Pan Am Global Holdings chartered an Icelandair Boeing 757, adding the iconic globe to the tail and Pan Am titles on the fuselage, for a 12-day, round-the-world itinerary, retracing some of the airline's classic routes.

Abra Group announces fleet expansion

ABRA GROUP, which controls Colombia's Avianca and Brazilian airline GOL, has announced an incremental order with Airbus for 50 A320neos and five A350-900s. The deal brings the total number of A320neo Family aircraft ordered by Abra Group to 150, with a current delivery backlog of 138. The firm has also inked an agreement with Avolon to lease up to seven Airbus A330neos.

Adrian Neuhauser, Abra's CEO, said the A320neo deal would ensure "the replacement and growth needs" of the group's narrowbody fleet as it seeks to enhance connectivity to new destinations in the Americas and Europe. It also has 96 Boeing 737 MAX aircraft on order, with deliveries scheduled from 2025 until 2030.

Abra is scheduled to receive its first A320neo with an Airspace cabin later this year. It will join the Avianca fleet. The jet features a cutting-edge interior, including XL Bins, which offer a 60% increase in overhead storage space. Passengers will also have "an enhanced sense of personal space", supported by newly designed window bezels and sidewalls, complemented by dynamic lighting themes tailored to different flight phases.

Meanwhile, the airline group has also begun the process of becoming a publicly traded US company, filing papers with the US SEC on October 15. (Photo Vincenzo Pace)

Breeze granted US flag carrier status

THE FAA has granted Breeze Airways US flag carrier status, meaning the airline is now eligible to operate international routes under bilateral aviation agreements. To coincide with the news, Breeze also announced its first three international destinations to Cancun, Punta Cana and Montego Bay from six airports. Breeze will also open a new base in Raleigh-Durham to support the expansion.

David Neeleman, Breeze founder and CEO, said that receiving US flag carrier status was "a huge milestone" for the airline, "and one that our team members have been working tirelessly on for the last three years.

"We're excited to bring the same convenience and elevated experience they love about our domestic flights to three exciting new international destinations."

The Raleigh-Durham base becomes the 12th in the airline's network and is expected to open in Q1 of 2026.

Meanwhile, in a *Bloomberg TV* interview, Neeleman said there is enough market for Breeze's fleet to expand up to 400 aircraft, positioning it in the same tier as Alaska Airlines and JetBlue Airways. (Photo Airbus/Tad Denson/Airwind)

AA welcomes first **A321XLR**

AMERICAN AIRLINES (AA) has welcomed its first Airbus A321XLR, becoming the first US carrier to debut the game-changing jet. The aircraft N303NY (c/n 12409) was delivered directly to the airline's Dallas/Fort Worth base from the Airbus assembly line at Hamburg on October 22.

The carrier has become the first in the world to configure the XLR in a three-class layout, with 20 Flagship Suites featuring lie-flat seats and privacy doors, 12 Premium Economy, and 123 Main Cabin.

The aircraft will make its inaugural flight on December 18 on its transcontinental service from New York/JFK to Los Angeles. AA said that the type, of which it has 50 on order, is expected to make its international debut in the first half of 2026, although no details have been announced regarding which routes it will serve. (Photo American Airlines)

in brief

Alaska Airlines ended codeshare partnerships with **LATAM Airlines** and **Singapore Airlines** on October 1. The move comes as the airline, along with its sister carrier Hawaiian Airlines, introduced an overhauled shared redemption programme, Atmos Rewards.

Porter Airlines and **American Airlines** have launched a new codeshare partnership. AA will now place its code on selected Porter flights from Toronto/Pearson, including to Edmonton, Halifax, Ottawa, and Victoria. Porter, meanwhile, will add its code on selected transborder and domestic flights operated by AA. (Photo American Airlines)

Frontier Airlines has said that it will cease all services from Palm Springs International Airport on November 29. The Denver-based ultra low-cost carrier cited low demand as the reason for the move. Currently, the airline serves Denver and San Francisco from the Californian facility, both of which are also served by United and Southwest.

Garvin Medera, CEO of **Caribbean Airlines**, has stepped down from the role and been replaced by the airline's chief operating officer, Nirmala Ramai. Medera is the third member of the state-owned airline's senior leadership team to leave in recent months. In a statement, the company said that the transition comes at an important time for the airline and is part of its ongoing focus on "stability, safety and accountability."

Air Canada has unveiled the fifth destination to be served by its incoming Airbus A321XLRs from its Montreal base. From June 2026, the new narrowbodied jet will replace the airline's A330s on the transatlantic crossing to Porto, increasing from three to five flights per week for the peak summer season.

Double debut for **Qantas A321XLRs**

AUSTRALIAN FLAG carrier Qantas entered a new chapter in its fleet renewal programme with the launch of its first two Airbus A321XLRs, which both operated their maiden commercial flights on September 25.

The aircraft – VH-OGA (c/n 12323) *Great Ocean Road* and VH-OGB (c/n 12427) *Outback Way* – flew inaugural services from Sydney to Melbourne and Sydney to Perth, respectively. Qantas becomes the first airline in the Asia-Pacific region and the fourth globally after Iberia, Aer Lingus and Wizz Air to operate the A321XLR.

The type will replace the carrier's Boeing 737-800 fleet and will be initially deployed on domestic services before expanding its reach to thinner international destinations.

Vanessa Hudson, Qantas Group CEO, described the milestone as "a proud moment for everyone involved", adding that the A321XLR will allow Qantas to operate both domestic and short-haul international routes, including new destinations in Southeast Asia.

The airline conducted nearly 350 training flights and over 40,000 hours of preparation ahead of the launch. A third A321XLR was due to arrive in November, with the fleet growing to seven by mid-2026.

Qantas has 48 A321XLRs on order, 16 of which will feature lie-flat business class seats for long domestic and regional international services. The type forms part of the carrier's 200-aircraft fleet renewal programme, the largest in its history. (Photo Qantas)

IndiGo firms additional A350 order

INDIAN LOW-COST carrier IndiGo has finalised a firm order for 30 Airbus A350-900s, converting a memorandum of understanding signed at the IATA Annual General Meeting in Delhi in June into a binding deal. The latest agreement doubles the airline's total A350 commitments to 60 aircraft.

Pieter Elbers, IndiGo chief executive, said the milestone "solidifies our commitment to expanding our international footprint and offering unparalleled connectivity to our customers," adding that the A350s will "play a pivotal role in connecting India with more destinations across the globe".

Benoît de Saint-Exupéry, Airbus executive vice president of sales, said: "This milestone reinforces our strong partnership with one of the fastest-growing airlines in the world, and we look forward to supporting their expansion into new long-haul markets."

The order came just weeks before IndiGo inaugurated daily flights between Mumbai and London/Heathrow on October 26, 2025, marking its debut at Europe's busiest hub. Operated by a Boeing 787-9 Dreamliner leased from Norse Atlantic Airways, the service features a dual-class layout with economy and the airline's new IndiGoStretch business class product. The airline offers seatback entertainment and complimentary meals to all customers.

Elbers hailed the London launch as "a proud milestone and a strategic step forward in strengthening IndiGo's global footprint," following the successful start of Mumbai-Manchester flights earlier this year.

Air NZ jets back to **Hamilton**

AIR NEW Zealand has reintroduced domestic jet operations to the city of Hamilton for the first time in 25 years, following the launch of a new Airbus A320 service between Christchurch and Hamilton.

The inaugural flight NZ324, operated by A320-232, ZK-OJR (c/n 4884), touched down at 4.20pm on September 18, marking a historic moment for the city and restoring a jet connection last seen in the late 1990s. The new jet service typically covers the route in around one hour, significantly faster than the existing ATR 72 regional services, which typically take between one hour 30 minutes and one hour 50 minutes. This additional flight will also add around 25,000 extra seats each year and strengthen links between New Zealand's North and South Islands.

Located around 78 miles south of Auckland, Hamilton serves as the gateway to the Waikato region, known for attractions such as the Hobbiton Movie Set, Waitomo Glowworm Caves, and Hamilton Gardens.

Air New Zealand's outgoing chief executive Greg Foran said the return of jet operations underlined the airline's confidence in regional demand: "This is only the second time we've introduced a jet on a regional route, following the success of Invercargill-Auckland in 2019. Growth means greater access for communities, more support for tourism and trade, and more opportunities for New Zealanders to thrive."

In a further expansion of domestic connectivity, Air New Zealand also announced a new interline partnership with regional carrier Air Chathams, enabling passengers to book a single ticket combining both airlines' flights. Initially covering Whakatāne-Auckland services, the interline agreement includes through-checked baggage and seamless connections across Air New Zealand's network.

Incoming CEO Nikhil Ravishankar said the collaboration would help strengthen air links across smaller communities: "By working together, we're making it easier for customers in more parts of the country to stay connected. It's about giving travellers more choice, a smoother experience, and supporting local economies." (Photo AirTeamImages.com/Simon Willson)

Reborn Korean carrier eyes American market

SOUTH KOREA'S Parata Air has taken the next step in its relaunch plans by filing an application with the US Department of Transportation (DOT) for a foreign air carrier permit. The move comes as the airline re-establishes itself following a full restructuring and brand overhaul.

The application, dated October 23, 2025, seeks approval for Parata Air to operate scheduled and charter services between South Korea and the United States, with proposed routes linking Seoul/Incheon to Las Vegas and Los Angeles from March 29, 2026. The carrier plans to use its two Airbus A330-200 aircraft – HL8709 (c/n 1016) and HL8714 (c/n 919) – leased from Air Lease Corporation and Hangrun Tech.

Parata Air formally resumed flying in late September, marking its return to the skies with a Yangyang-Jeju service on September 30, followed by a Gimpo-Jeju flight on October 2. These services represented the airline's first operations since its predecessor, Fly Gangwon, ceased trading in May 2023 amid financial difficulties.

The restructured carrier is now wholly owned by Winix Inc., a South Korean consumer electronics manufacturer that acquired the defunct airline in mid-2024. Following the takeover, the business was re-registered under its new name – Parata meaning 'blue' in Korean, symbolising clear skies – and regained its Air Operator Certificate on September 8, 2025.

Parata Air's initial focus is on rebuilding its domestic and regional network before expanding internationally. The carrier has also outlined plans to add routes from Incheon to Japan and Vietnam during the winter 2026 season. (Photo Parata Air)

PARATA
1st A330-200

Inaugural A220 flight for **Air Niugini**

Air Niugini
50

PAPA NEW Guinean flag carrier Air Niugini has operated its first commercial flight with the Airbus A220-300, marking a significant step in the airline's fleet modernisation programme.

The inaugural service, flight PX100, departed Port Moresby's Jacksons Airport shortly after 10am on October 4, operating to Lae and later Kavieng. The event mirrored Air Niugini's first-ever flight on November 1, 1973, which also linked Port Moresby and Lae using a Douglas DC-3. The aircraft, P2-PGA (c/n 55388), is the first of 11 A220s to be delivered to the national carrier.

A short ceremony was held at Jacksons Airport before departure, attended by deputy prime minister John Rosso and minister for state-owned enterprises William Duma. Both emphasised the government's K3bn (£528m) investment in renewing Air Niugini's fleet and its commitment to providing reliable and efficient air transport across Papua New Guinea.

Commanding the inaugural flight were Captain Timothy Narara and Captain Christian Felix Patchlatko from Airbus. The aircraft received a traditional water salute on arrival in Kavieng, where it was welcomed by local officials.

Delivered on September 15, 2025, coinciding with Papua New Guinea's 50th anniversary of independence, the A220 is expected to replace the airline's ageing Fokker 70 and Fokker 100 fleets which currently comprise four and five examples, respectively. Two additional A220s are due before the end of the year. (Photo Airbus)

Double delivery for **Suparna**

金鹏航空 Suparna Airlines

Shanghai-based Suparna Airlines has taken delivery of two Boeing 777Fs. The first example, B-227U (c/n 70288), was handed over on September 24 and ferried directly to Nanjing/Lukou, landing the following day. The second widebody, B-227X (c/n 70289), was delivered exactly a month later, on October 24, but was instead ferried to Shanghai/Pudong, landing a day later. Formerly known as Yangtze River Airlines until 2017, Suparna operates a 15-strong fleet comprising ten Boeing 737-800s, three 747-400 freighters, and a pair of 777Fs AIRTEAMIMAGES.COM/JASON CHEN

in brief

A buyer for bankrupt Australian carrier **Rex Airlines** has been found. US-based aviation firm, Air T, was announced as the buyer by Rex's administrators on October 21. If approved, the proposed acquisition, which includes Rex's entire operation and its aircraft maintenance unit, will allow the airline to exit the administration process after 15 months.

Vietnam's **VietJetAir** handed back the two COMAC C909s it had wet-leased from Chengdu Airlines. The pair, B-652G (c/n 185) and B-656E (c/n 196), had been in service with the low-cost carrier since April 12, but were returned on October 17 after the airline decided not to renew the lease. Media reports suggest high operational costs associated with foreign crew and maintenance services were a factor in the decision.

Virgin Australia has become the first airline down under to allow pets in the cabins of its aircraft. The trial on selected flights between Melbourne, the Gold Coast and the Sunshine Coast will run until January 30, 2026, and if successful, could be rolled out on eligible domestic services by late next year. Dave Emerson, CEO, said: "Pets are part of the family, and this new service is about making sure every member, human or furry, can enjoy the journey together." (Photo Virgin Australia)

The **Cathay Pacific Group** and **Airbus** have announced a $70m joint investment to increase sustainable aviation fuel (SAF) production, primarily in Asia. According to a statement from Airbus, the two will collaborate to "identify, evaluate and invest in projects that support the scaling of SAF production." The investment will also include collaboration to advocate for supportive SAF policies on both the supply and demand side across Asia.

Japan Airlines Group is reportedly considering replacement aircraft for its regional fleet. Currently, the Japanese flag carrier's regional operation boasts a varied fleet, consisting of 18 Embraer E170s, 14 Embraer E190s, 13 ATR42s, two ATR 72s, and five de Havilland Canada DHC-8 Q400s, according to ch-aviation. No details have been announced about what might replace them. The airline said it was looking to simplify its fleet structure in the long term.

Embraer bags TrueNoord order

TRUENOORD HAS signed a firm order with Embraer for 20 E195-E2s with purchase rights for a further 20 of the type, plus up to ten E175s. At list price, the Amsterdam-headquartered aircraft lessor will pay $1.8bn for the initial order. Its fleet of 101 aircraft covers ten types in the 50-150 seat range, on lease to more than 30 operators in 24 countries.

Anne-Bart Tieleman, CEO of TrueNoord, said: "This landmark agreement represents TrueNoord's first direct order with an aircraft manufacturer – a milestone in the company's journey. It marks an important stepping stone in our continued growth as a global leasing platform, underlining our commitment to investing in next-generation, fuel-efficient regional jets. Partnering with Embraer allows the business to further strengthen its offering and support airlines with aircraft that deliver superior economics and environmental benefits."

The airframer states the E195-E2 delivers exceptional performance and efficiency, making it the ideal choice for lessors and operators looking to futureproof their fleets. Arjan Meijer, CEO of Embraer Commercial Aviation, added: "This first direct order from TrueNoord is a strong endorsement of the E2 family's capabilities and success in the market, and a testament to the trust and collaboration between our teams. This agreement also sends a strong signal to the market – reinforcing the momentum behind next-generation small narrowbody aircraft and the growing demand for sustainable, right-sized aircraft." (Photo Embraer)

FAA green lights 737 MAX boost

BOEING'S UPLIFT continues, after the Federal Aviation Administration (FAA) approved the manufacturer to increase monthly 737 MAX production. Rates can now rise from 38 to 42 aircraft per month, after fixes to quality issues, improved training and supply chain problems were addressed, together with the stabilisation of its production system. The FAA set the cap at 38 last year after the January 2024 in-flight blowout of an Alaska Airlines 737 MAX 9 mid-cabin door plug, for which it proposed a fine of $3,139,139 – the maximum allowed under US law.

The agency reported: "FAA safety inspectors conducted extensive reviews of Boeing's production lines to ensure that this small production rate increase will be done safely. Our direct oversight of Boeing's production processes, implementation of its safety management system and whistleblower protections has not changed. Safety critical personnel, including inspectors at Boeing, are continuing to work during the government shutdown."

The airframer said: "We appreciate the work by our team, our suppliers and the FAA to ensure we are prepared to increase production with safety and quality at the forefront."

Of the 325 MAX delivered in the first three-quarters of 2025, 42 were in September, with the monthly average standing at 36 aircraft.

Boeing CEO Kelly Ortberg told a Morgan Stanley investor conference in September: "We'll go from 42 and then we'll go up another five and we'll go up another five. We'll get to where that inventory is more balanced with the supply chain, probably around the 47 a month production rate." (Photo Boeing)

Airbus Deliveries

AnimaWings

Animawings accepted delivery of Airbus A220-300, YR-GUN (c/n 55383), on September 9, after a ferry flight from Montreal/Mirabel to Bucharest/Henri Coandă via Keflavik. The Pratt & Whitney-powered two-class aircraft offering 12 business and 125 economy seats is one of a trio in the airline's fleet, which also includes a pair of A320-200s AIRTEAMIMAGES.COM/LOREDANA CIOCLEI

Airbus delivered the following aircraft in September:

A220-100	1	Air Lease Corporation [Croatia Airlines]
A220-300	8	Azorra [Animawings]; Breeze Airways (2); Azorra [Air Niugini]; JetBlue Airways (2); Air France; Air Canada
A319neo	1	Air China
A320neo	18	Shenzhen Airlines (2); ICBC Leasing (Loong Air); Avolon [JetSMART Chile]; CDB Leasing [Azerbaijan Airlines]; TAP Air Portugal; British Airways (2); BOC Aviation [Condor]; Air Arabia; China Southern Airlines; BOC Aviation [Gulf Air]; CALC [Sichuan Airlines]; Saudia [flyadeal] (2); SMBC Aviation Capital [SkyExpress]; flynas; Macquarie AirFinance Holdings [SAS]
A321neo	40	Delta Air Lines (4); IndiGo (8); China Southern Airlines (2); Wizz Air (2); Viva Aerobus; Aer Lingus (2); Jet2.com (3); China Eastern Airlines (3); Qantas Airways [Jetstar Airways]; Air China (2); Pegasus Airlines; AerCap [Etihad Airways] (2); NAS Aviation Services [Qatar Airways] (2); United Airlines (2); Aegean Airlines; AirAsia; Korean Air; Volaris; Frontier Airlines
A330-900	4	Air Côte d'Ivoire; Delta Air Lines (2); CIT Leasing [Malaysia Airlines];
A350-900	1	Turkish Airlines
Total	73	
Annual total to date	506	

Airbus goes Mobile a second time

AIRBUS FORMALLY opened its second A320 Family final assembly line at its plant in Mobile, Alabama, on October 13, as part of its effort to raise production of A320neos to 75 per month in 2027. It inaugurated the facility in 2015, delivering the first A320 the following year and, after extending capacity, an A220 line was introduced in 2019.

Stephen McNair, the City of Mobile's director of external and government affairs, said on X that it was "an incredible day celebrating the people of Mobile who work hard every day to deliver the finest commercial aircrafts in the world". In combination, its assembly facilities in Toulouse, Hamburg, Mobile and Tianjin delivered a total of 454 narrowbodies in the first nine months of this year, comprising four A220-100s, 58 A220-300s, ten A319neos, 132 A320neos and 250 A321neos. (Photo Airbus)

The A320 inherits the crown

BOEING'S HOLD on the crown for manufacturing the world's most delivered airliner was snatched by Airbus when A320neo, HZ-NS95 (c/n 12783), was accepted by flynas on September 29, becoming the 60th of the type to join the Saudi Arabian low-cost carrier's fleet. A delivery flight from Toulouse to Riyadh landed on October 7, when the wheels of aviation history rotated in favour of Airbus. The new aircraft meant A320 Family deliveries had reached 12,260 since the first aircraft, F-GFKA (c/n 005) was delivered to Air France in March 1988. The A320 became the first 'fly-by-wire' airliner when it was introduced, something seen as revolutionary at the time, but an aviation standard in 2025. The wider Family includes the A318, A319, A320 and A321, with the latter three further developed with new engine options, and the A321 even more so, with LR and XLR variants.

In comparison, Boeing launched the 737 into commercial service when Lufthansa accepted 737-130, D-ABEC (c/n 19015), on December 27, 1967. It has been manufactured in multiple variants over the following decades since the original -100 airframe; through -200 to -900 series, plus more recent MAX iterations. In time it became the narrowbody king of the skies, a crown it has now relinquished to its Airbus rival. (Photo flynas)

Boeing Deliveries

Luanda-based TAAG Angola Airlines accepted delivery of Boeing 787-9 Dreamliner, D2-TER (c/n 66913), on September 30, pictured here at Everett prior to the handover. The aircraft is the second of the type to join the fleet, eight months after the first which was configured with 16 business, 21 premium economy and 276 economy seats. ER's layout is not yet known AIRTEAMIMAGES.COM/DIPANKAR BHAKTA

Boeing delivered the following aircraft in September:

737 MAX	40	AerCap (2); BOC Aviation (3); CDB Leasing; China Southern Airlines; Copa Airlines (3); Donghai Airlines; flydubai; GOL Linhas Aéreas; Korean Air; Phoenix Aviation Capital (2); Ryanair (10); Shenzhen Airlines (2); Southwest Airlines (4); United Airlines (3); Virgin Australia (2); WestJet; Xiamen Airlines (2)
767-300F	2	FedEx Express; UPS
777F	3	DHL Aviation Americas (2); Yangtze River Finance Leasing
787-9	6	China Eastern Airlines; Etihad Airways; Lufthansa; Qatar Airways; TAAG Angola Airlines; Turkish Airlines
787-10	1	Air France-KLM
Total	52	
Annual total to date	425	

Seagliders for **Scotland**?

RHODE ISLAND-based REGENT Craft has entered into a collaboration with Scotland's Highlands and Islands Transport Partnership (HITRANS) to explore whether its Seaglider flying boat concept could apply to inter-island travel. The agreement will focus on data sharing and a feasibility study to explore how Seaglider could improve the transportation network in Scotland. David Holden, HITRANS regional sustainable aviation manager, said: "This is a hugely exciting prospect for transport in the Highlands and Islands. [It] has the potential to transform how people travel across the Highlands and Islands in the future."

Adam Triolo, VP of commercial business development, REGENT, added: "Our work with HITRANS is an exciting opportunity to showcase to Scotland and the Highlands communities the potential human and environmental benefits Seaglider vessels could have on coastal transportation. [The] technology is an all-electric sustainable solution that could transform the way people transit this area of natural beauty." The Seaglider has capacity for two crew and up to 12 passengers and operates exclusively over water in three modes: hull, hydrofoil and flight in ground effect. REGENT says that at 55ft in length, with a 65ft wingspan and 12 propulsion units, it will be the largest ever all-electric flying machine. (Photo REGENT Craft)

Ten trumps **eight**

BOTH BOEING and Airbus pulled out the stops during September with deliveries to Ryanair and IndiGo. Boeing delivered an impressive ten 737 MAX 8200s to the Dublin-based low-cost operator, and did so from September 22-30. Airline boss Michael O'Leary has been critical of the Seattle-based manufacturer in recent times, so the uplift in delivery should be good news for him and the airline. Meanwhile, over at Airbus, eight A321neos were winging their way to Delhi-based IndiGo, albeit over a slightly longer period, from September 3-29.

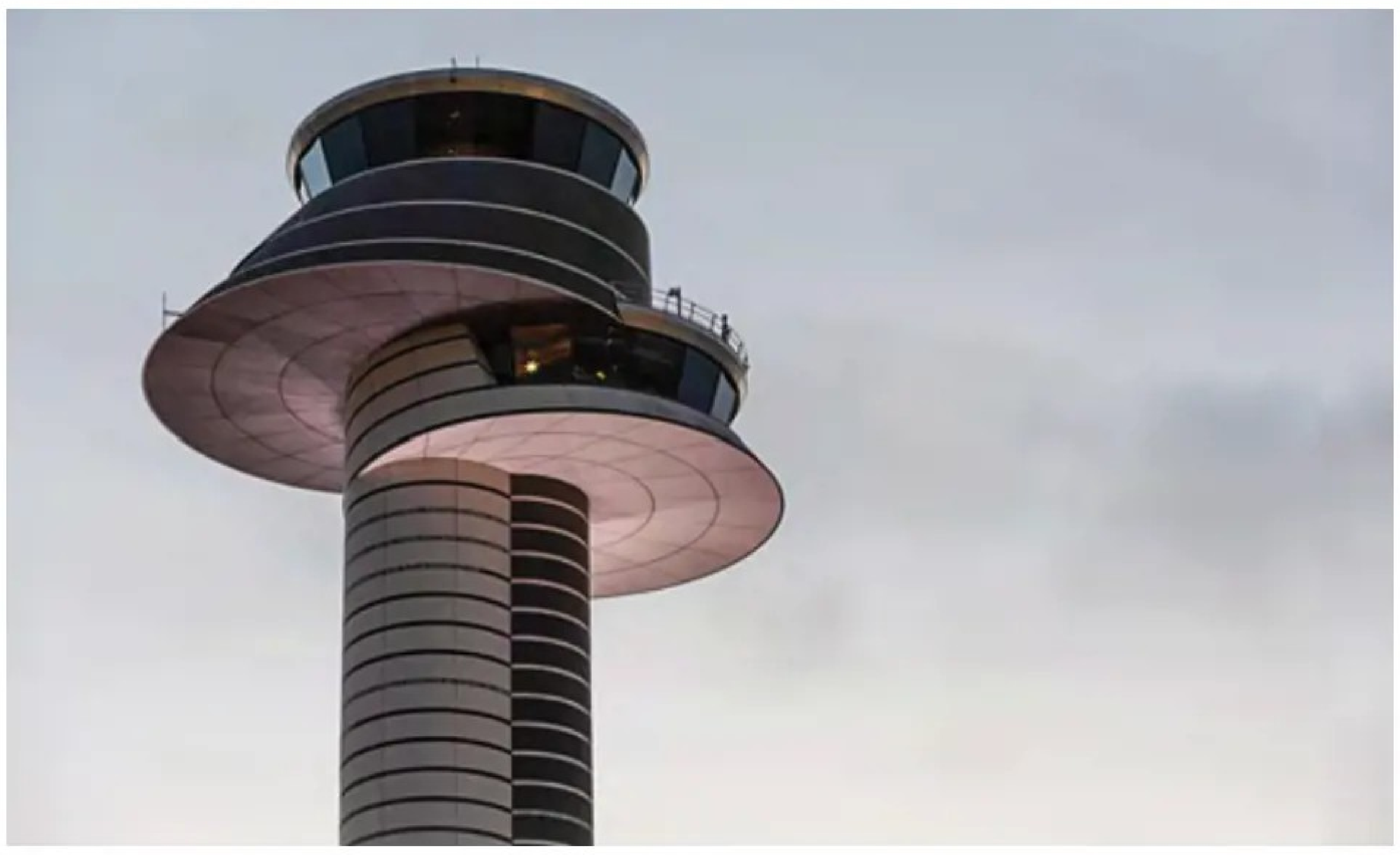
In comparison to this time last year, both manufacturers have increased production; Toulouse-based Airbus delivering 506 aircraft to the end of September, up nine on the same time last year. Over the same period, Boeing delivered 425 aircraft, a notable 52% increase on the 280 at the same point in 2024. Aircraft deliveries to both airlines continued at an impressive rate during October with Ryanair receiving a further five MAX 8200s, and IndiGo welcoming one A320neo and three A321neos, as *Airliner World* went to press. (Photo Martin Needham)

Archer acquires Lilium's patents

ARCHER AVIATION has obtained the patents portfolio of defunct electric vertical take-off and landing (eVTOL) developer Lilium. After failing to secure additional financing, the German firm became insolvent and collapsed in February 2025. Archer and its Californian rival Joby Aviation engaged in a competitive bid process to acquire Lilium's patents – the result of almost ten years of development and $1.5bn in expenditure.

Archer was victorious with a winning bid of €18m for 300 patents "relating to key innovations in high-voltage systems, battery management, advanced aircraft design, flight controls, electric engines, propellers and ducted fans." Of its former rival, it added: "Its visionary eVTOL platform was regarded by many as technologically ahead of its time." Adam Goldstein, founder and CEO of Archer, said: "Lilium's pioneering work advanced the frontier of eVTOL design and technology, and we're excited to bring their cutting-edge technologies into the fold at Archer as we advance our product roadmap." (Photo Lilium)

Arlanda pioneers new arrivals concept



STOCKHOLM/ARLANDA AIRPORT has become the first in Europe to introduce a pioneering concept intended to increase the number of parallel arrivals per hour by altering the required separation standard. The move is also an essential step towards improving airport efficiency and reducing emissions.

Working with Swedavia and the Swedish air traffic controller Luftfartsverket (LFV), the concept, known as Established on RNP (EoR), will be used for aircraft flying shorter curved approaches to runway 01L/19R. Aircraft flying the instrument landing system approach will also benefit from the move. This, Swedavia said, was because fewer aircraft would need to use the runway dedicated for arrivals, thereby reducing the queue for that runway.

To fly a curved approach, aircraft must be fitted with special equipment, pilots must be trained to fly such a landing, and their National Supervisory Authority must grant permission. It is hoped that the move will now encourage further airlines to invest in the technique to operate these approaches, thereby reducing the need to fly over noise-sensitive areas.

Usually, the standard separation for aircraft conducting parallel approaches is 3nm lateral and 1,000ft vertical. The new EoR separation standard, first approved by ICAO in 2018, removes such rules.

Susanne Norman, director of operations at Swedavia, said: “For us, it is of course gratifying that Swedavia will be the first in Europe to apply the new concept for managing arrivals. Enabling more curved approaches is also the most effective way to support airlines in their transition work, in addition to facilitating increased use of sustainable aviation fuel (SAF).”

Two of the airport’s biggest users, SAS and Norwegian, have welcomed the change, with the former calling it “a step in the right direction towards a more efficient and more sustainable airspace around Arlanda.” (Photo Swedavia/Daniel Asplund)

Virtual ATC for **Saudi Arabia**

THE FIRST virtual air traffic control (ATC) tower in the Middle East, located at Al-Ula International Airport, has been approved by the Saudi General Authority of Civil Aviation (GACA). The move comes after Saudi Air Navigation Services (SANS), together with Indra, a Spanish ATC specialist with which it has been working since 2022, met all safety and security requirements for the new system. Now, air traffic using Al-Ula will be controlled remotely from Jeddah/King Abdulaziz International Airport, some 600km away.

The new system features 360° high-definition cameras, sensors and artificial intelligence capabilities for airspace monitoring and analysis. The systems are designed to increase efficiency and reduce workloads, while ensuring smoother traffic flows, lower operating costs, and support for sustainability.

Al-Ula International, formerly known as Prince Abdul Majeed bin Abdulaziz Domestic Airport, opened in October 2011. In October 2023, a massive expansion was announced, designed to increase capacity from 400,000 passengers per year to six million by 2030. This forms part of the kingdom’s Vision 2030 programme, designed to stimulate the economy and enhance tourism in the region.

Boost for Birmingham

BIRMINGHAM AIRPORT has announced a £300m investment over the next four years as it prepares to handle a forecast 17 million passengers by 2029.

Improvements include new food and drink outlets in the departure lounge, more e-Gates, and extra capacity to handle baggage via self-service drop-off and new sorting and handling systems. A total of £40m will also be spent on the airfield itself, including reconstructing taxiways, new aircraft stands, new lighting, and work on the single runway.

Making the announcement at the Regional Investment Summit, airport CEO, Nick Barton said that the airport could see “more growth coming,” and the new works would ensure that all areas are “fit for purpose”. He also confirmed that the facility has initiated a process to deliver its next masterplan up to 2040 and would announce its chosen partner for this project imminently.

Last year, the airport came under intense scrutiny after passengers experienced long security screening delays. (Photo Birmingham Airport)

Welcome to BHX

UK airport expansion could jeopardise **net-zero efforts**

EXPANSION PLANS already approved at several UK airports could jeopardise the UK’s plans to reach net-zero, according to a report released by a committee of MPs. The cross-party Environmental Audit Committee (EAC) said that current government policies would be “insufficient to deliver a reduction in carbon emissions from the aviation sector in line with carbon budgets”. This, coupled with an increase in demand, “puts the government’s delivery of net zero in serious jeopardy”.

Luton, Stansted, and Gatwick airports have all been given the green light to proceed with their expansion plans. Meanwhile, the third runway at London/Heathrow is also expected to be fast-tracked so that the country can “experience the benefits sooner”.

The committee said that while it may be possible for the government to deliver these expansion projects alongside its climate and environment targets, the proposed environmental impact from airport expansion would make such targets “significantly more difficult to achieve and at much greater effort and cost.

“Furthermore, the government has not demonstrated that the economic growth from airport expansion provides enough benefit to outweigh the negative climate and environmental impacts it will lead to,” they added.

The damning report also said that the existing Jet Zero strategy was outdated and relied too heavily on abatement approaches and technologies such as sustainable aviation fuel that are yet to be used or produced on a commercial scale.

Sky View

Insights and opinions on the industry's hottest topics

By Jonathan Hinkles, 30-year UK airline executive

As Chancellor Rachel Reeves finally acknowledges what those in aviation have known all along – that Brexit was bad for business – there seems to be fresh damage incoming from the direction of the EU. Early promising signs in the reform of the Air Passenger Rights (Regulation 261/2004 to its friends) have taken a serious turn for the worse as the bill has progressed through the European Parliament.

It was with hope and aspiration that I wrote in the August 2025 issue of *Airliner World* about an outbreak of sanity among European legislators over these rules. They've caused a plethora of unintended consequences for airlines and passengers alike since they were introduced over 20 years ago.

The intended changes would have helped passengers by reducing flight cancellations: airlines are currently compelled to cancel flights outright rather than sit with delays caused by weather, air traffic control or other factors beyond their control. They would have helped airlines by clarifying the rules around such extraordinary circumstances, where the airline is not obliged to pay compensation. This clarity would also have cut down on the endless jamboree of no-win, no-fee court cases which congest the UK's creaking justice system.

If you use the government's Money Claim service to recover a debt, one of the first questions asked by the system is whether you're an airline passenger. There's no mention of trains, ships or buses! It's a telling sign that this compensation culture is truly running amok in the airline industry.

Thus, when it comes to reform of the rules and providing greater clarity, what's not to like?

Unfortunately, the European Parliament has found lots not to like. Almost every amendment to improve or clarify the regulations has been stripped back. Worse still, lawmakers have shamelessly capitalised upon this re-opening of the rule book to throw in new requirements for passenger hand baggage entitlements, pre-seating and other elements. None are remotely relevant to the original legislation: the reform process has been hijacked to serve as a soap box for any MEP with a dislike of any particular airline's policies. It's a horror story in the making.

Meanwhile other sectors – and I think of the car rental market here, given a number of experiences from which I've concluded it's the regulatory equivalent of the Wild West – continue with blatantly anti-consumer practices. The European Parliament leaves them wholly undisturbed in its rush to further constrain airlines.

The airline industry's trade bodies are quite rightly up in arms. The new proposals will be hugely costly at a time when airlines are already battling against the costs of EU sustainable aviation fuel mandates, new rules about fuel uplifts and the ongoing problems in the supply and overhaul of spare parts and major components. For low-cost airlines, the proposed hand baggage and pre-seating rules will strip away valuable sources of income, thereby driving up fares for all as those carriers are forced to generate income via the only avenue left.

At the same time, the European Parliament has taken no action to address ongoing causes of airline delays and cancellations like French air traffic control strikes; nor to ensure airlines can recover costs from third parties when things like the unexpected closure of Heathrow due to fire in an electricity substation, or the UK NATS air traffic control outages happen. None of those are airlines' fault, but the airline is firmly on the hook for costly passenger welfare and re-routing on those awful occasions when a WhatsApp ping from your airline operations team warns of an impending major issue.

The perception of most politicians is that airlines are rich, super profitable and can afford it. The reality is there is a small number of very large airlines that are indeed highly profitable, yet there is a large number of smaller airlines for whom every day is a battle for survival. It is turning into an industry where you need to have a lot of money to be able to make any money.

We've already seen a trickle of European airline failures in recent weeks, with Iceland's PLAY, and Sweden's Braathens International Airways filing for insolvency and shutting up shop. What's been a trickle so far will turn into a flood of airline collapses if these proposed European rules are passed into law. Worse still, the UK's commitment in the Brexit agreement to maintain parity with EU passenger rules means that we've relinquished any voice in shaping these changes, yet are bound by a lemming-esque obligation to follow the EU's lead over the cliff edge to oblivion. It's truly the worst of all worlds.

> "The reality is there is a small number of very large airlines that are indeed highly profitable, yet there is a large number of smaller airlines for whom every day is a battle for survival"

MISSION COMPLETE

At the end of December, Samaritan's Purse will retire its venerable DC-8, the last of the type on the US register. **Bernd Sturm** flies aboard its final visit to Oshkosh and tells the story of this historic airframe

Samaritan's Purse
INTERNATIONAL RELIEF
Helping in Jesus' Name

Who would have thought when McDonnell Douglas DC-8-72CF, N782SP (c/n 46013), rolled off the Long Beach production line on Christmas Eve 1968, it would outlast all her fellow sisterships to become the last active, US-registered DC-8. Having been completed at Christmas, it seems a serendipitous destiny that the aircraft would spend the final decade of its airborne life helping people in need as the backbone for Samaritan's Purse, an evangelical humanitarian relief organisation based in North Carolina.

Saved from the scrapyard

When Samaritan's Purse International Relief was looking to upgrade its fleet and transport capability with an aircraft that could operate with increased cargo and passenger capacity, the organisation came across a former Air Transport International example. In March 2015, the aircraft – then registered N721CX – had been parked at Roswell International Air Center in New Mexico for four months, ready to be scrapped and parted out.

Its fate seemed pre-determined with disassembly plans already made, but Samaritan's Purse stepped in, purchasing the aircraft, refurbishing it, and returning it to an airworthy status. On June 29, 2015, it was re-registered as N782SP and repainted in the organisation's colours. Less than 24 hours after receiving Federal Aviation Administration (FAA) sign-off in April 2016, it was deployed on its first relief mission, airlifting an emergency field hospital to Ecuador in response to a devastating 7.8 (Richter scale) magnitude earthquake. More than 200 further missions would follow.

December 24, 1968

At the end of 1968, after a year in which political unrest fractured the US, with the »

> "With close to 99,000 flight hours, the airframe is nearing its design limit of 100,000, and no costly extension of the aircraft's certificate is planned for 2026"

Samaritan's Purse McDonnell Douglas DC-8-72CF, N782SP (c/n 46013), rolled off the Long Beach production line in on Christmas Eve 1968 ALL IMAGES BERND STURM UNLESS STATED

International, and deployed on cargo and combi charter flights, which included military charters for the US Transportation Command. It was finally ‘retired’ on December 18, 2013, at the venerable age of 45, being stored at Wilmington Air Park (Ohio), Amarillo International Airport (Texas), and Roswell, before Samaritan’s Purse stepped in.

assassinations of Martin Luther King and Robert Kennedy, the Cold War and Vietnam War, something changed on Christmas Eve. A fascinated world watched NASA’s Apollo 8 become the first crewed spacecraft to leave earth’s gravitational field and orbit the moon. In Long Beach, California, another DC-8 rolled off the McDonnell Douglas production line. The aircraft was delivered to Finnair as OH-LFR, on January 27, 1969, to become the Helsinki-based carrier’s first transatlantic jetliner. Thirteen days later, on February 9, 1969, the first Boeing 747 made its maiden flight.

Delivered as a combi, Finnair re-registered the DC-8 as OH-LFT in April 1969, and it would remain with the airline until November 1981. It made Finnish history as the first to go transatlantic for the airline, and the first to operate without a navigator, reducing the flight crew to three in the process, when it flew from Amsterdam/Schiphol to New York/JFK on October 21, 1969. Its eventual replacement at Finnair was the McDonnell Douglas DC-10-30.

The DC-8 began a second life when the Armée de l’Air (French Air Force) purchased the aircraft from Finnair, sending it for a major overhaul and conversion with UTA Industries in France. The most notable change was the replacement of the four Pratt & Whitney JT3D engines with modern Stage 3 noise compliant CFM56-2C1s, completed on September 17, 1982. Re-registered as F-RAFG, it soldiered on for the French Air Force into the next millennium until it was replaced by the Airbus A310 and later A340-200 in November of 2004.

Changing hands once again, it was purchased by Air Transport

ABOVE: ***The aircraft was delivered to Finnair as DC-8-62CF, OH-LFT*** **Paavo Nurmi** ***in January 1969 and is seen here operating a charter flight to Greece*** FINNISH AVIATION MUSEUM

Having flown more than 200 relief missions for the Christian humanitarian relief organisation over the last decade, carrying more than 8.7 million pounds of cargo into disaster zones, its flying days will conclude at the end of 2025. With close to 99,000 flight hours, the airframe is nearing its design limit of 100,000, and no costly extension of the aircraft’s certificate is planned for 2026. Spare parts and qualified flight crews are increasingly hard to find, with the solitary DC-8 simulator located in Wilmington, Ohio. It will be replaced by Boeing 767-381F, N367SP (c/n 33510), which arrived at the organisation’s Greensboro/Piedmont Triad International base on July 8, 2025, to be prepared for entry into service.

The planning process

With the imminent retirement of an aircraft with such historical and humanitarian significance, it was clear the best way to pay tribute to the DC-8 and its team was to report from a flight. Being on board a relief mission posed significant challenges, almost impossible to arrange, but I was thrilled to be invited by Samaritan’s Purse to accompany the DC-8 on its final visit to EAA AirVenture Oshkosh

BELOW: ***The DC-8 replacement aircraft from 2026 will be Boeing 767-381F, N367SP (c/n 33510)***

Samaritan's Purse
INTERNATIONAL RELIEF

"After doughnuts and coffee in the beautiful North Carolina morning light on July 20, the team completed the remaining flight preparations"

in July 2025. Occasionally the DC-8 has been deployed to airshows, to showcase the relief work of the organisation, and the aircraft to the public. Although airshow visits are planned well in advance, they are dependent on the aircraft not being needed for disaster response.

I was originally slated to fly the DC-8 to the Sun 'n' Fun airshow in Florida on March 30, but after a 7.7 (Richter scale) magnitude earthquake struck Myanmar on March 28, killing more than 3,500 people and injuring thousands of others, that changed. Samaritan's Purse deployed their Disaster Assistance Response Team (DART) immediately and its attendance at the airshow was cancelled. The DC-8 and a chartered 747 cargo aircraft delivered over 100 tons of relief supplies, and an emergency field hospital to the Southeast Asian nation.

DC-8 into Oshkosh

I was welcomed to the Samaritan's Purse Airlift Response Centre (ARC) in Greensboro, on July 19, the day before the flight by Jim Vechery, director mission aviation services, for an extensive tour of the facilities. The organisation inaugurated the new ARC in 2023 and the hangar has capacity for both the DC-8 and more recently acquired Boeing 757-225PCF, N783SP (c/n 22611).

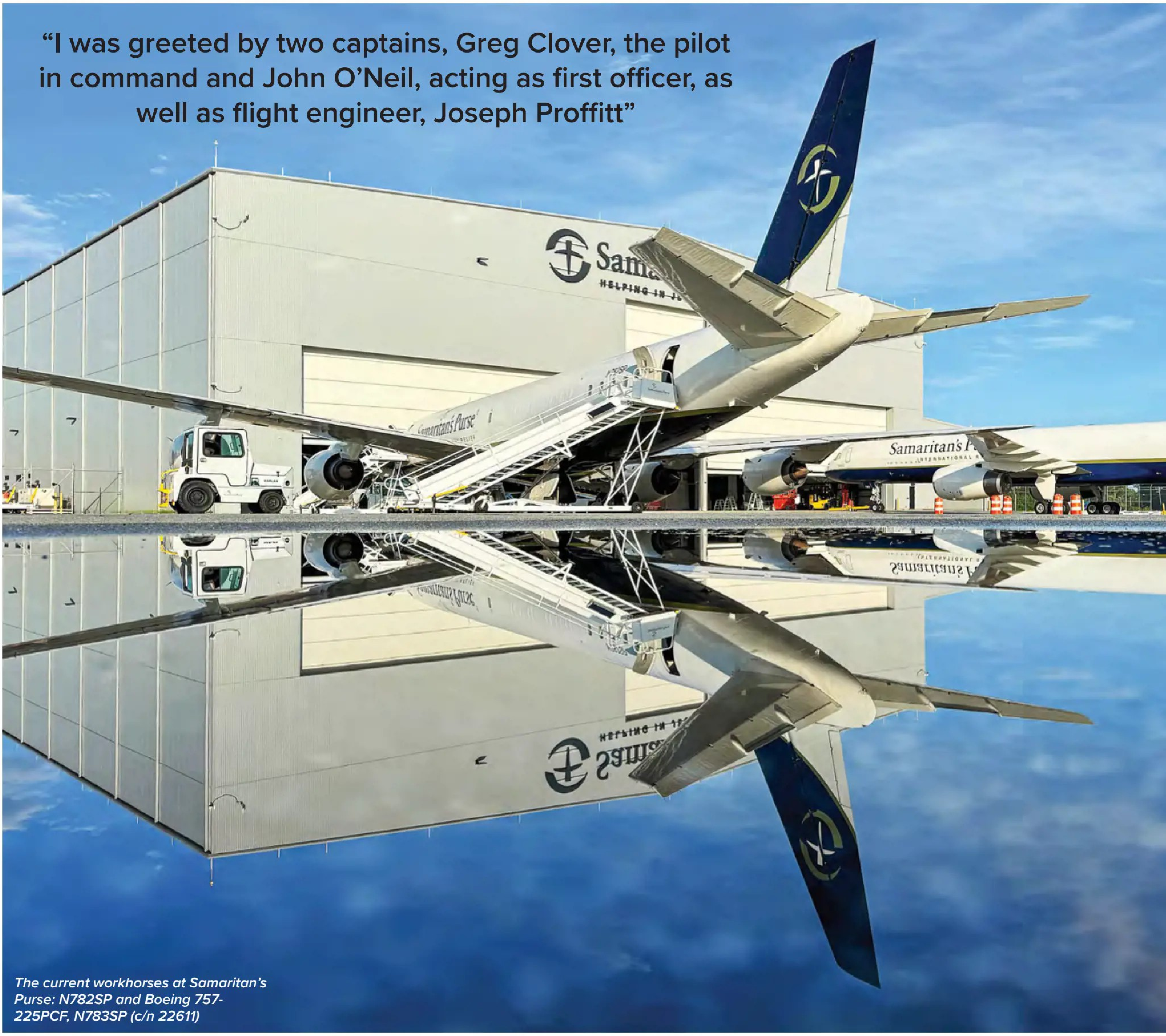
Attached to the hangar is a maintenance facility and warehouse, where all conceivable spare parts for both aircraft are kept. All maintenance, except for heavy checks, is performed on-site by certified personnel. The facilities also include offices and briefing rooms, as well as a spacious reception area where the teams meet before »

ABOVE: *The evening before departure to Oshkosh on July 20*

RIGHT: *The left-hand main landing gear of the aircraft is kept in pristine condition, despite being more than 56 years old*

RIGHT: *Loaded cargo for Oshkosh – presentation material designed to highlight the work of the organisation to the public at the airshow*

“I was greeted by two captains, Greg Clover, the pilot in command and John O’Neil, acting as first officer, as well as flight engineer, Joseph Proffitt”



The current workhorses at Samaritan’s Purse: N782SP and Boeing 757-225PCF, N783SP (c/n 22611)

Before any flight departs, it’s customary to form a circle in front of the aircraft and pray

embarking on their missions around the world. The attention to detail, dedication and identification with the work are striking, and there are photos of the aircraft and various relief missions distributed throughout the building. The immediate impression is that Christian compassion determines the actions here.

After the detailed tour, it was time for dinner and a good night’s sleep, prior to meeting the 30 person team in reception the next morning at 7am sharp. The group would accompany the DC-8 to Oshkosh to present the aircraft and the work of the aid organisation to the public.

After doughnuts and coffee in the beautiful North Carolina morning light on July 20, the team completed the remaining flight preparations. It was a hot, humid morning, and the sun was already burning mercilessly from a cloudless sky, with temperatures soaring to over 30°C.

Helping in Jesus' Name

ABOVE: ***Samaritan's Purse is a Christian humanitarian relief organisation***

At Samaritan's Purse, it's customary for the entire crew to gather in a large circle in front of the aircraft and pray prior to departure, although on this occasion in the heat it was moved to the shade of the hangar.

Boarding commenced through the rear left door, and it was a sight to behold, the historic quad jet with its distinctive elegant shape in perfect sunshine under a deep blue sky. Since the DC-8 doesn't have an auxiliary power unit (APU) to provide air conditioning on the ground, temperatures in the 32-seat passenger cabin stretching across six rows at the rear of the fuselage, approached 50°C. Seat 1A, directly opposite the small door providing access to the cargo hold and flight deck at the other end, was reserved for me. Passengers sit in former American Airlines economy class seats.

The lack of an APU also meant an air start unit (ASU) was required to light the engines. It supplies the bleed air for engine start, which in modern aircraft is generated by the APU. The roar of the ASU could be heard in the rear of the aircraft as engines one and two were started using pneumatic compressed air. The ASU was removed and then the two starboard engines were started using the cross-bleed procedure, in which bleed air from the two running engines is used for engines three and four. The multi-tonal concert of the four CFM56-2C1s filled the cabin. During this procedure, no bleed air was available to cool the cabin, but when the air conditioning was finally switched on, temperatures slowly reduced to a more bearable level. It was easy to imagine what it must be like on board during relief missions in even hotter climates before the air conditioning comes to life.

Pushback was prompt at 9am, taxiing northeast towards runway 23L, and then holding. In the cockpit, with the parking brake held, Captain Greg Slover pushed all four thrust levers into the take-off position. Since the DC-8 has no engine synchronisation, flight engineer Joseph Proffitt handled the fine adjustment of the engines. With the parking brake released and passengers pressed back into their seats, the DC-8 accelerated with impressive performance to rotation speed before steeply climbing into the azure, cloudless sky. For a 56-year-old aircraft, the onboard noise level was surprisingly quiet, certainly thanks in part to the conversion to CFM-56 turbofan engines. As soon as cruising

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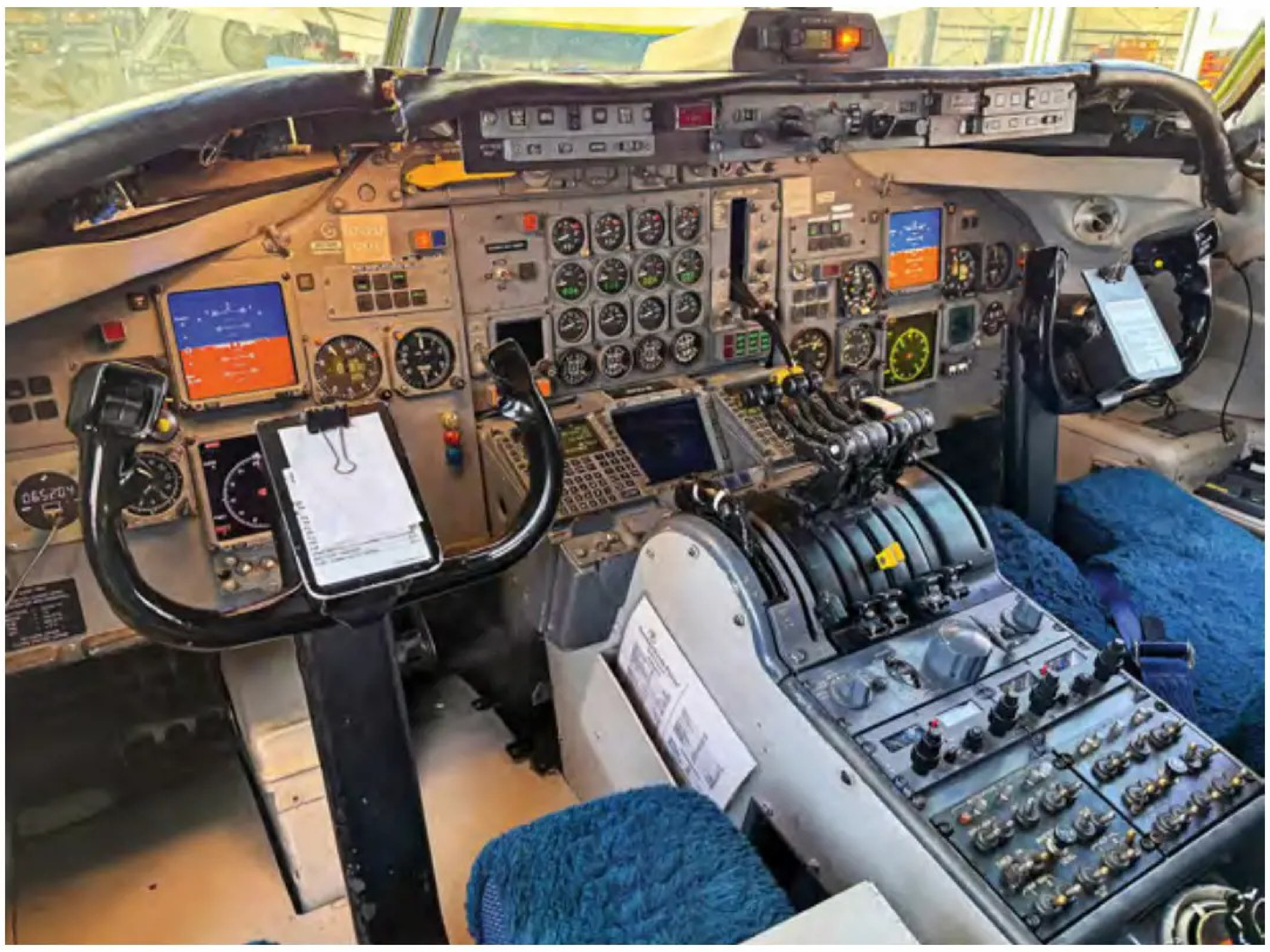
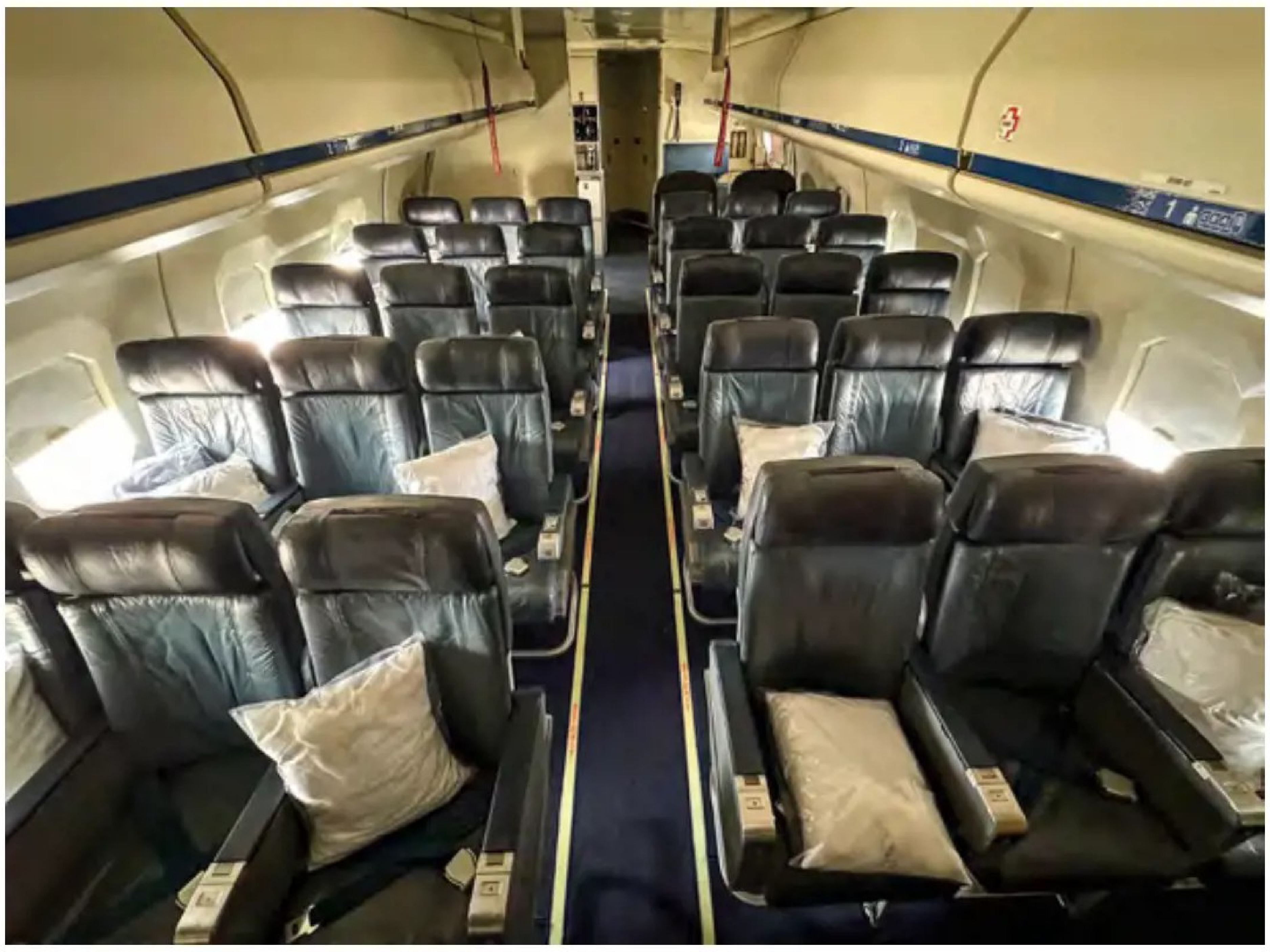
Samaritan's Purse
HELPING IN JESUS' NAME

BELOW: ***Boarding for Oshkosh with 30 Samaritan's Purse staff travelling to present the work of the organisation to the public***

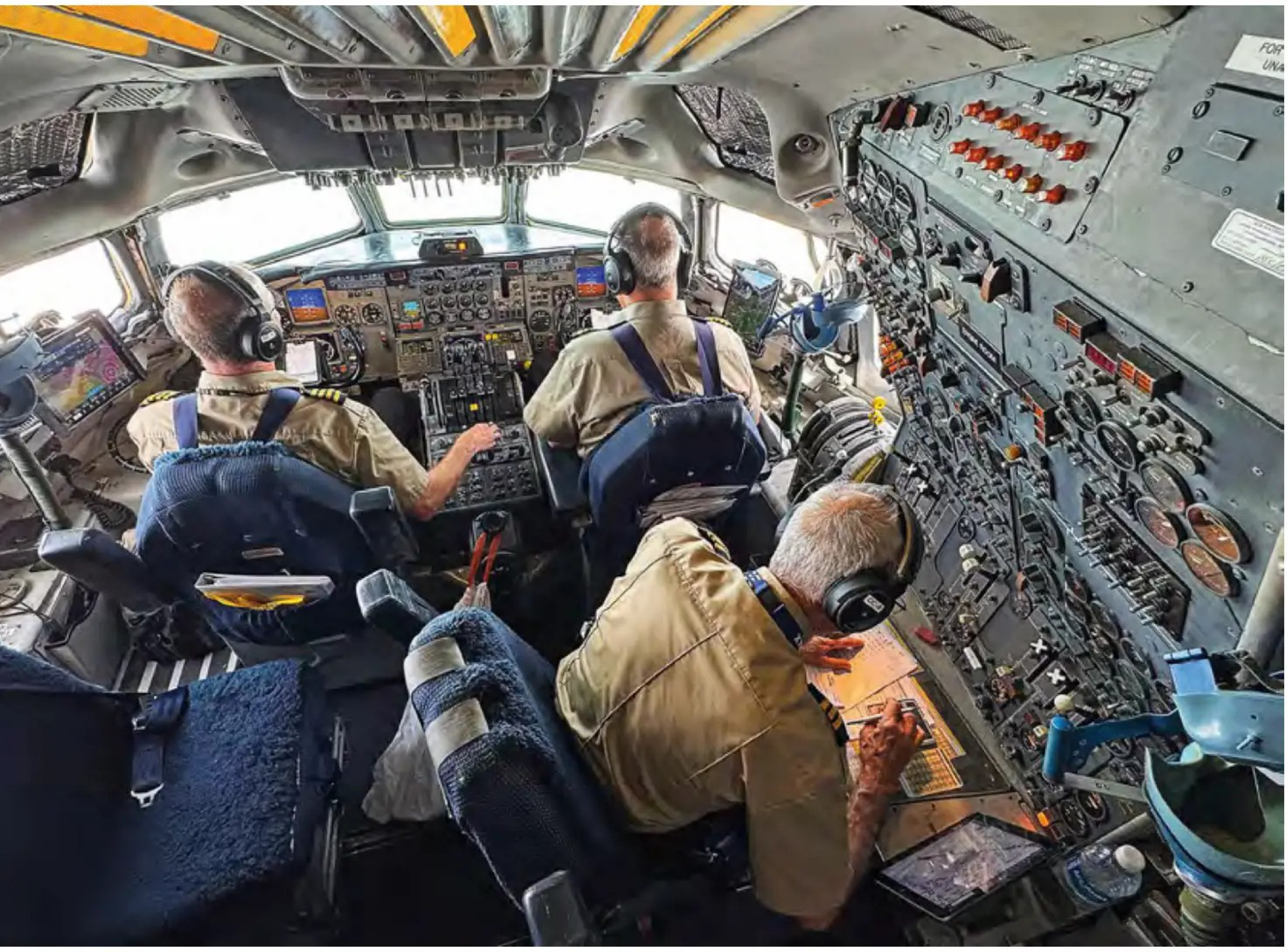


LEFT: *Apart from the artificial horizon and the navigation display, the cockpit was entirely equipped with conventional, analogue instruments*



LEFT: *Up to 32 passengers and two flight attendants sit in former American Airlines economy class seats*

BELOW: *Apart from two primary flight displays, the analogue cockpit is from a bygone era, requiring a flight engineer to calculate performance data manually and manage the aircraft systems*



altitude was reached, the charming service of the two flight attendants, Carol Faulkner and Cathy Gellatly, began, distributing sandwiches and soft drinks.

There was no time for me to eat as I was given the opportunity to visit the flight deck on behalf of *Airliner World*. I went through the narrow, low door into the cargo hold, then walked along the port side to reach the cockpit. There I was greeted by two captains, Greg Clover, the pilot in command and John O'Neil, acting as first officer, as well as flight engineer, Joseph Proffitt. Although we were in cruise flight, it was immediately noticeable that the workload in the cockpit was considerably greater than in modern computer assisted aircraft. Apart from the artificial horizon and the navigation display, which had been replaced by small screens years ago, the cockpit of the DC-8 was entirely equipped with conventional, analogue instruments. The flight engineer's panel, retaining its original condition, requires a great deal of attention, even during cruise flight. All onboard systems are operated and controlled manually. The lower part of the panel is dominated by the DC-8's complex fuel system, which consists of eight individual tanks. Fuel balancing and management is controlled by the flight engineer, who also plays a key role in operating all onboard systems, hydraulics, pneumatics, electrical system, cabin pressurisation, and so on.

Captain O'Neil explained the aircraft requires more forward planning, in terms of control, in comparison to more modern aircraft. Flight crew must anticipate the flight path and mentally, be well ahead of the aircraft. This is particularly noticeable in descent planning, as the DC-8 has no air brakes to intervene if the aircraft is getting on the high side of the flight profile during approach. While DC-8s equipped with their original engines can operate their two inner engines in idle reverse inflight to increase drag and rate of descent, this is not possible on the -70 series models. A particularly conservative and precise descent plan is therefore required for every approach. As Captain O'Neil pointed out, this can become especially challenging when

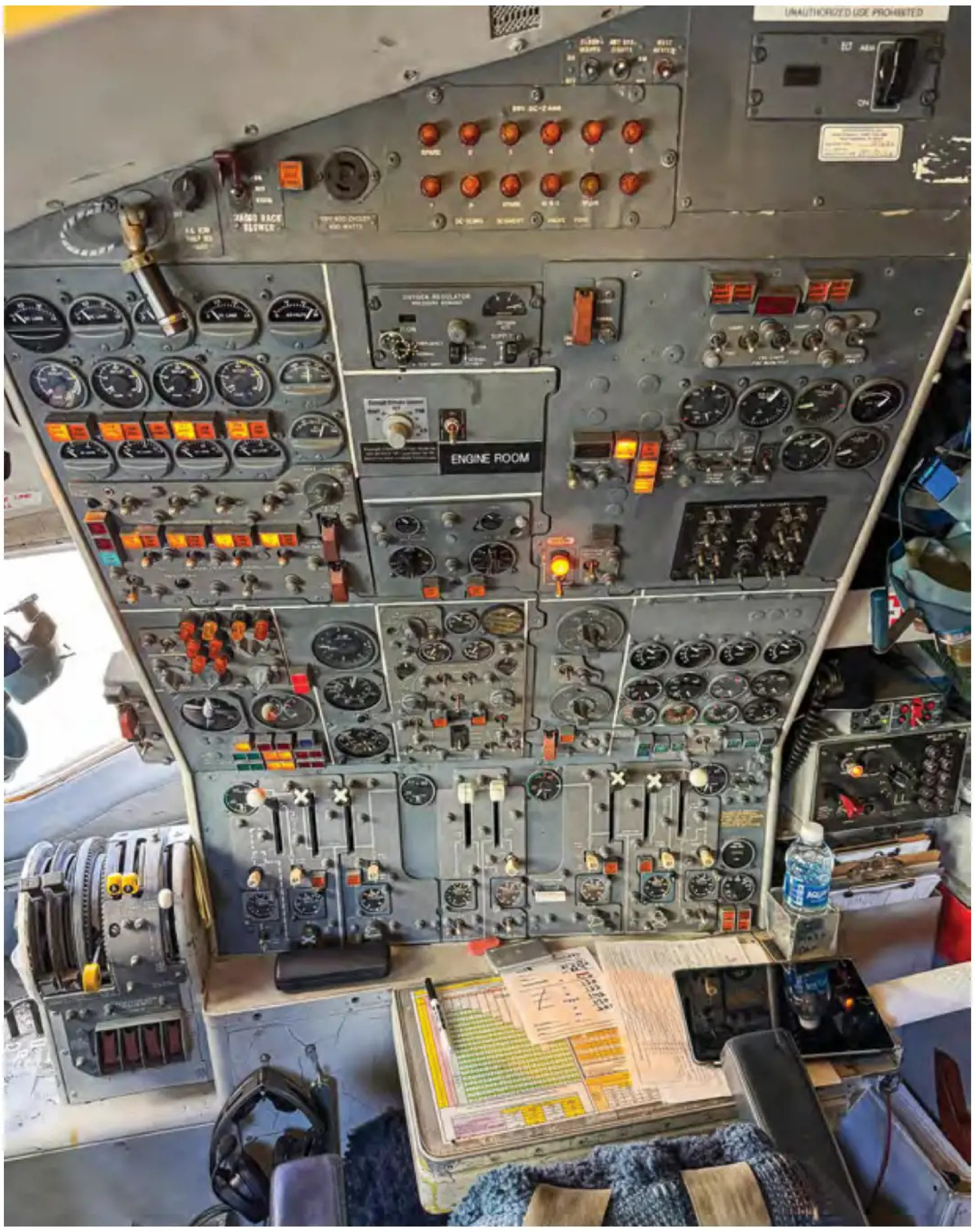
> **"Captain O'Neil pointed out descent planning into disaster zones is often restricted by mountainous terrain, air traffic control restrictions, or areas of ongoing fighting"**

operating into disaster zones, where descent planning is often restricted by mountainous terrain, air traffic control restrictions, or areas of ongoing fighting.

As the descent towards Oshkosh began I returned to my seat to fully enjoy the last few minutes of what was likely the last DC-8 flight of my life. Gazing out through the characteristic, square windows over the fields of Wisconsin, the flaps and landing gear were extended, and flight NSP8 was given clearance to land. On approach, we flew over hundreds of aircraft that had already arrived at their parking positions at Oshkosh – what a sight! Shortly before 11am local time, the DC-8 touched down gently on runway 36, the reversers came to life and slowed the aircraft to taxi speed. It was an almost indescribable feeling to land aboard one of the highlights of the 2025 show, to look out of the window into the faces of aviation enthusiasts admiring the vintage jetliner's arrival.

The DC-8 taxied to Boeing Plaza, the part of the airport where it would be on ground display for the following week. The engines were shut down, then crew and passengers deplaned via a set of stairs, before a tug manoeuvred the DC-8 into its designated display position.

RIGHT: ***The flight engineer's panel requires a great deal of attention, even during a cruise flight***



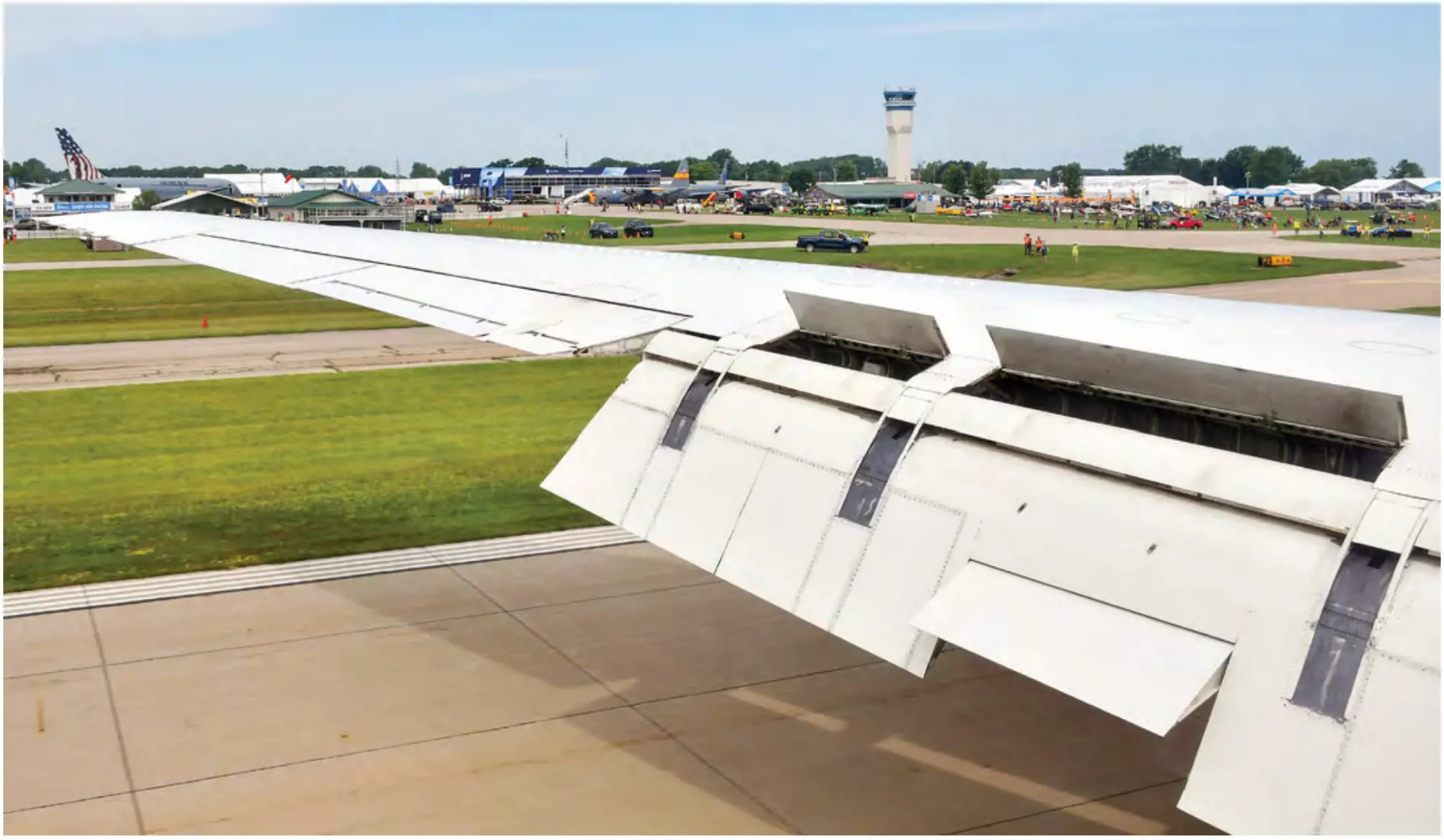
Showcasing the DC-8

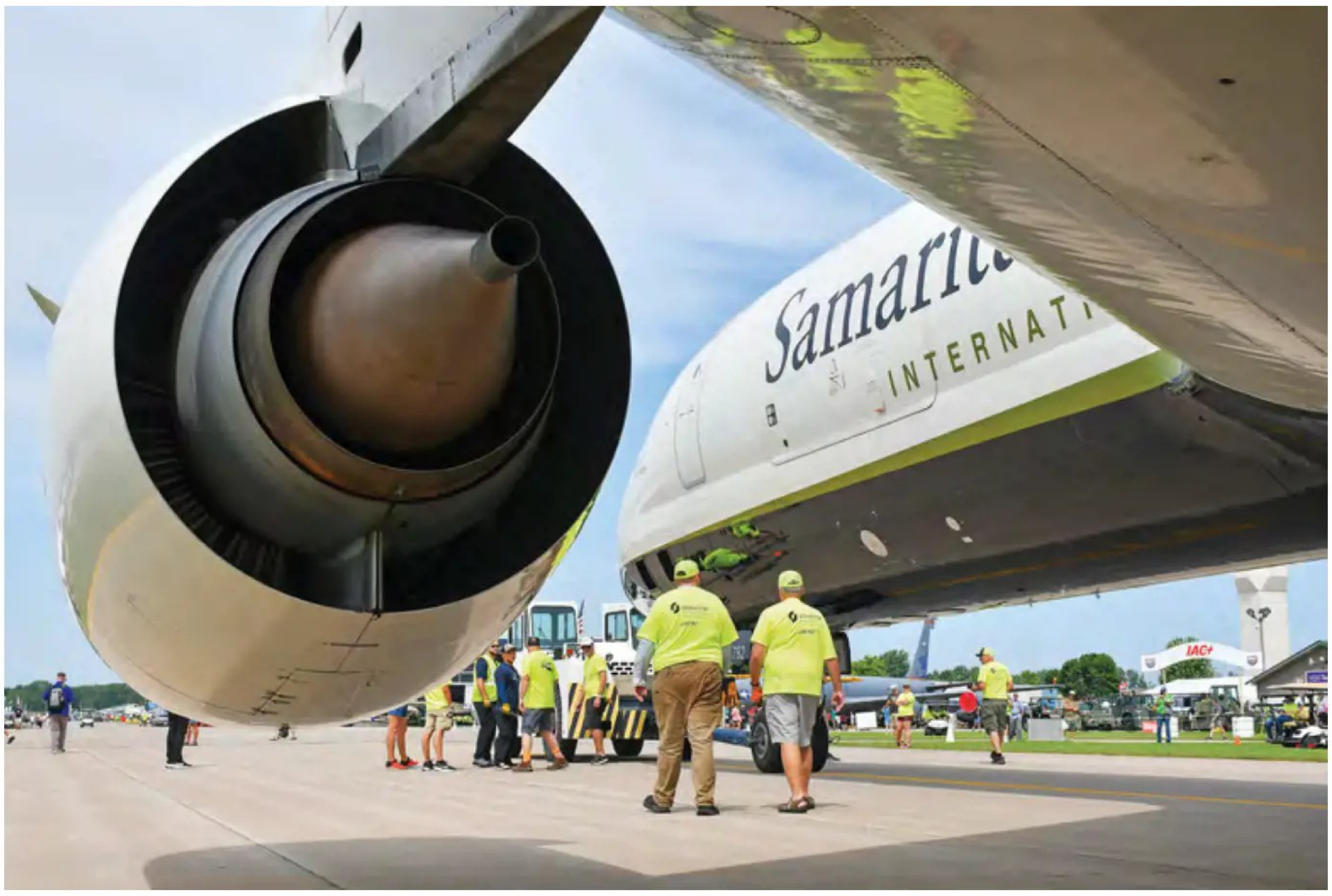
Work then began on preparing the aircraft for the airshow, scheduled to begin the following day. Some of the team took care of securing the aircraft, while others began unloading the cargo. Over the next few hours, the DC-8 was meticulously prepared to enable thousands of visitors to be guided through it in small groups. In 15-minute clusters, visitors would be introduced to the work of Samaritan's Purse as a Christian aid organisation.

On board the DC-8, they could watch films about the ministry's work, and see various forms of relief supplies such as emergency food rations, solar lights, and hygiene kits. A water purification system and

»

BELOW: ***Touching down at Oshkosh with full flaps extended and the spoilers up, safely bringing the 56-year-old airliner to a smooth stop***





ABOVE: ***The original Pratt & Whitney JT3D engines were replaced with CFM International CFM56-2Cs in 1982***

LEFT: ***Having been prepared meticulously to showcase the work of the organisation to visitors, the aircraft was ready when the Oshkosh Air Show began on July 21***

a small emergency field hospital were set up outside the aircraft. Though the cockpit would remain inaccessible to visitors, considerable effort was made to illustrate it on posters, and via a video screen in the forward cargo hold. The dedication and professionalism shown by the team to bring the aircraft's mission to the public in such a short amount of time was impressive.

When a mission calls

The original plan was for the DC-8 to be on display for a full week until the end of the air show on July 27, however, that was not to be. On July 23, the Israeli government unexpectedly agreed to allow international aid deliveries into war-torn Gaza. Although their aircraft was parked in a corner of Boeing Plaza behind all sorts of other aircraft, Samaritan's Purse reacted without hesitation and withdrew the DC-8 from Oshkosh. Less than 24 hours later, it left the airshow in a thunderstorm to deliver urgently needed aid supplies to Gaza via stops in Prestwick, Larnaca and Tel Aviv. The aircraft was constantly deployed, shuttling between Greensboro and Tel Aviv on seven missions in two months.

These actions clearly demonstrate that the DC-8, even in the final months of its career, has been an active international relief aircraft that could be sent to any part of the world within 24 hours to help people in need, and alleviate disaster. Even if it did mean withdrawing one of the main attractions from the largest airshow in the world.

Delivering hope, saving lives

Aviation enthusiasts might be thrilled that this DC-8 has survived this long, but they should not forget the good it has done around the world over the past ten years since being rescued from the scrapyard. Since that first mission in response to the Ecuadorean earthquake in April 2016, it has completed more than 200 relief flights, transporting more than 8.7 million pounds of cargo in the process. Samaritan's Purse has used the aircraft to transport doctors and relief workers, along with tons of food, medicine, shelter materials, blankets, and other items to aid victims of natural disasters, war, famine, and other emergencies.

When COVID-19 broke out and northern Italy quickly became a global epicentre of the pandemic, Samaritan's Purse airlifted more than 38 tons of medical relief, including an emergency field hospital with a 68-bed respiratory care unit, to Cremona. When conflict erupted in Ukraine, Samaritan's Purse used the DC-8 to transport staff and lifesaving supplies via the Polish airports of Kraków, Rzeszów and Katowice. It also established a medical supply programme – airlifting thousands of pounds of medical supplies and medications each week – to resupply hospitals and clinics in Ukraine. On return flights, the empty capacity of the aircraft was used to evacuate a total of around 300 refugees to Canada, where it stopped on the journey back to its Greensboro base.

On speaking to the aircraft crew at Oshkosh, most described those return flights from war-torn Ukraine as some of the most memorable of their careers. They remembered refugees who had lost almost everything, singing Ukrainian folk songs all the way across the Atlantic, simply thankful to be alive.

BELOW: ***Visitors were allowed to enter through the cargo door, move through the cabin past the displays and then exit via the rear door***

Natural disasters have been the reason for several other missions, airlifting urgently needed supplies like food, hygiene kits, water purification systems as well as medical aid to various disaster zones around the world. After back-to-back earthquakes rocked Turkey and Syria in 2023, killing tens of thousands and wounding over 100,000 more, Samaritan's Purse responded immediately with relief supplies and an emergency field hospital. Medical staff treated more than 8,000 patients and performed 270 surgeries. Samaritan's Purse also distributed over 7,000 emergency shelters and tens of thousands of relief supplies including mattresses, refrigerators, food boxes, solar lanterns, and hygiene kits. Almost 140 tons of cargo were airlifted on two DC-8 flights and one chartered 747.

In the months following Hurricanes Irma and Maria in the Caribbean during September 2017, the DC-8 made 44 round trips from North Carolina – airlifting more than 1,000 tons of emergency relief supplies to islands including Puerto Rico, St Martin, Antigua and Barbuda.

Powering down

With the end of 2025 and the end of the DC-8's working life both fast approaching, no decision has been made as to where the aircraft will end up once retired. A jet of such historic and humanitarian significance certainly deserves to be put on display and preserved for generations to come. From the point of view of an aviation enthusiast, seeing the oldest and last passenger carrying DC-8 just before it's retired, leaves a feeling of melancholy and sadness.

Two more cargo DC-8s remain airworthy, both DC-8-73F models: 9S-AJO (c/n 46133), operated by Trans Air Cargo Service in the Democratic Republic of the Congo, and manufactured in June 1970, and OB-2231-P (c/n 46125), operated by Skybus Jet Cargo of Peru, and manufactured in January 1970. The type will live on for a couple more years at least.

From the point of view of humanitarian relief work, Samaritan's Purse will embark on a new era with its new 757 and 767, both boosting cargo capacity and enabling the organisation to respond to humanitarian disasters even more efficiently and effectively. **AW**

The author would like to extend special thanks to the team of Samaritan's Purse, for the invitation to take part in a flight aboard N782SP and their help with organising and preparing the extraordinary flying experience. It was a great honour and a terrific pleasure to have been on board, and in touch with such a unique aircraft and team.

RIGHT: ***Supplies being loaded at Greensboro in readiness in to fly to Myanmar after the earthquake on March 28*** SAMARITAN'S PURSE
myanmar
...ritan's Purse
...TIONAL RELIEF

> "From the point of view of an aviation enthusiast, seeing the oldest and last passenger carrying DC-8 just before it's retired, leaves a feeling of melancholy and sadness"

BELOW: ***Most likely the final departure of a DC-8 from Oshkosh, on July 24, bound for Gaza to deliver urgently needed food supplies*** SAMARITAN'S PURSE
Samaritan's Purse
INTERNATIONAL RELIEF
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Pearl of the Visayas

Dirk Grothe visits Mactan Cebu International Airport, the international hub for the Visayas islands and second-largest metropolitan area in the Philippines

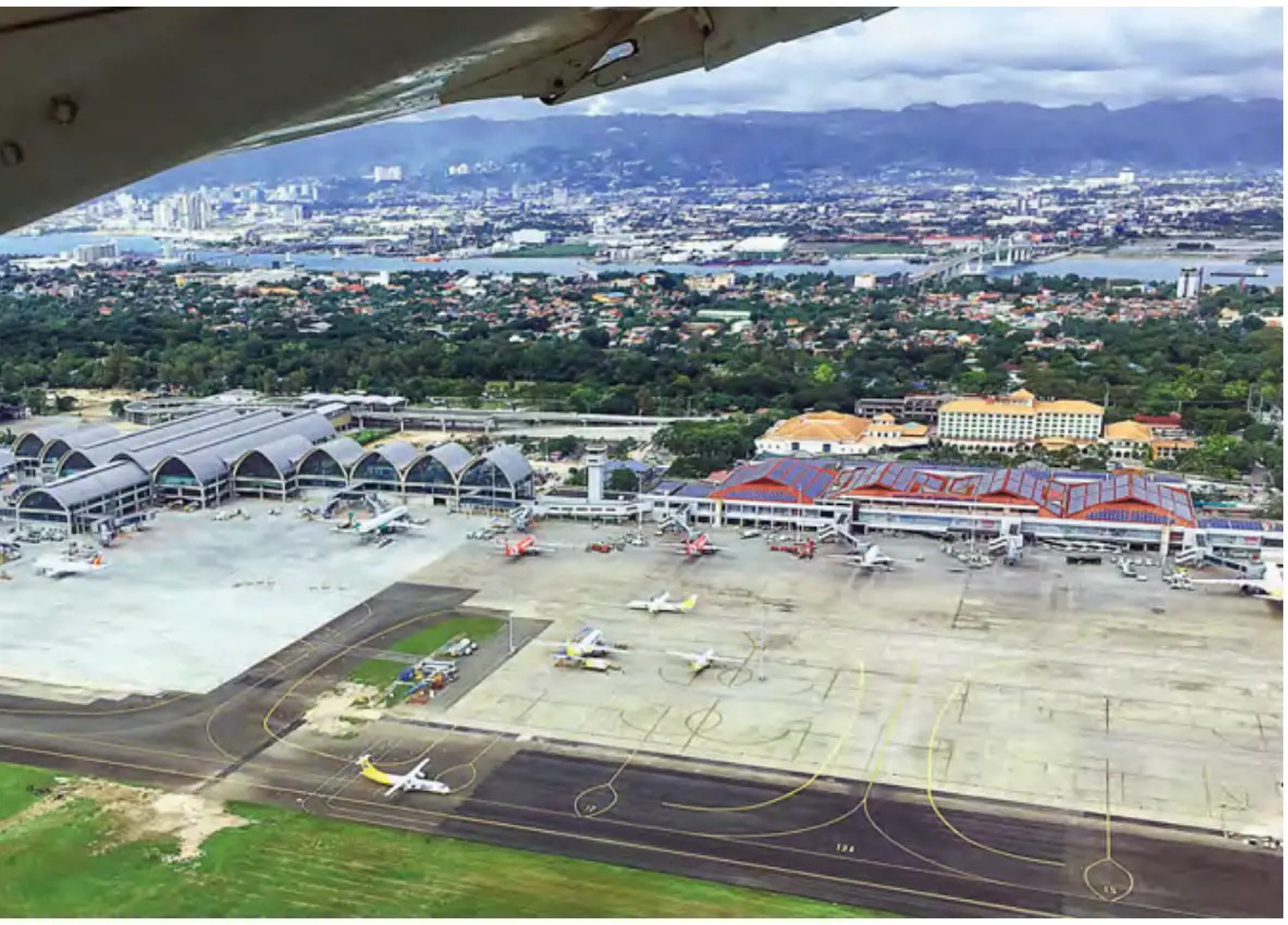
Anyone wanting to travel to the Philippines essentially has two arrival options: Manila and Cebu. Flights to Ninoy Aquino International Airport in Manila are available from many international hubs around the world. However, the multi-terminal facility with a design capacity for 32 million passengers annually, processed 50.1 million passengers in 2024 – see *Airliner World* March 2025 issue. Its four disparate terminals are spread around the airfield perimeter, requiring bus transfers to make connections. Regular airspace congestion also results in routine flight delays, so it's not surprising it has been voted one of the worst airports in the world several times.

Experienced travellers therefore avoid Manila whenever possible, preferring to fly to the Philippines' second-largest hub, Mactan Cebu International Airport. From Europe, there are connections via Doha, Dubai, Hanoi, Hong Kong, Singapore and Tokyo. There are also nonstop connections to China, Taiwan and Thailand, but South Korea leads the field with services to Seoul/Incheon, Busan and Daegu. Of the 11.3 million passengers using Mactan Cebu in 2024, 2.8 million were on international flights and 8.5 million on domestic routes. Almost half of the passengers (5.6 million) flew with the low-cost carrier, Cebu Pacific, which is the largest airline in the country, ahead of flag carrier, Philippine Airlines.

Mactan Island first rose to fame in 1521 when the native warrior Lapu-

2
STAFF ENTRY
MA..ONG PAG-AB...
TO CEBU

BELOW: ***The roof of Terminal 2 incorporates ten arches resembling waves, conveying a tropical feel*** ALL PHOTOS DIRK GROTHE



ABOVE: *Flag carrier Philippine Airlines operates to 11 destinations with a mix of aircraft types, including Airbus A330-343, RP-C8782 (c/n 1449), seen here with a 75th anniversary sticker*

LEFT: *Terminal 2 to the left and Terminal 1 on the right, with the Mactan Channel and Cebu City in the background*

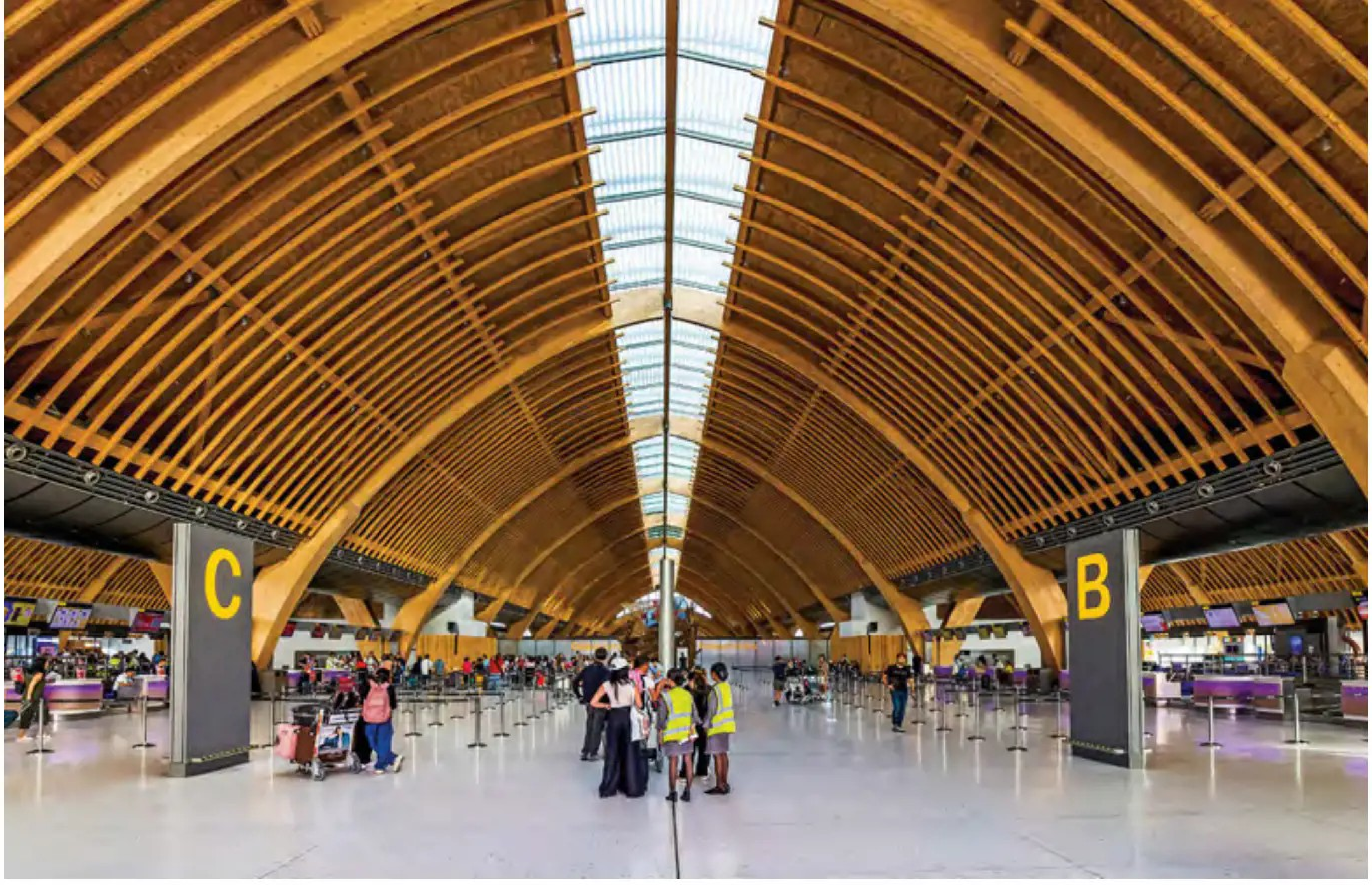
BELOW: *Cebu Pacific is the largest operator at the facility, carrying 5.6 million passengers in 2024 using a variety of types, including ATR 72-600, RP-C7290 (c/n 1530), seen here in front of Terminal 1*

Lapu defeated the Portuguese explorer, Ferdinand Magellan. The battle against colonial conquest made him a Philippine hero, and today the Lapu-Lapu shrine that looks out on Magellan Bay commemorates this historic struggle. Every April, 'Kadaugan sa Mactan' is celebrated, a re-enactment of the battle with traditional dances and costumes.

Airport development

Fast-forward to 1956 and the US Air Force built the first runway, which was planned for use as an emergency landing strip for its Strategic Air Command bombers. In the 1960s, the airport became a base for US Air Force C-130s during the Vietnam War. Commercial operations began on April 27, 1966, initially with domestic flights, before the first international charter flight took off in 1978. The modern Terminal 1 was

MACTAN-CEBU INTERNATIONAL AIRPORT
cebu pacific
RP-C7290



ABOVE: ***Inside Terminal 2, the arches built from Austrian glulam beams resemble a skeletal structure, a series of upturned boat hulls***

built in 1990 with an annual capacity for 4.5 million passengers.

A significant milestone was reached in 2014 when GMR-Megawide Cebu Airport Corporation (GMCAC) took over the operation of the hub. The private consortium comprised the Philippine Megawide Construction Corporation and the Indian GMR Group, a world-renowned infrastructure developer with an outstanding track record of transforming airports into exciting, efficient and award-winning destinations. The renovation and reconstruction of Terminal 1 was completed in 2016, increasing capacity to 8 million passengers. Further expansion in 2019 and 2020 increased capacity to 11.7 million passengers with a new 'Airport Village' connecting the arrival and departure levels. Today's domestic Terminal 1 covers an area of 414,680sq ft and features six jet bridges.

In 2015, the foundation stone for the international Terminal 2 was laid, with formal construction beginning in 2016. Just two years later, on June 7, 2018, Rodrigo Duterte, who was then the president of the Philippines, inaugurated the new terminal. With an area covering 705,000sq ft and offering seven jet bridges, it has the capacity to process 8 million passengers annually. It offers four check-in lanes and a total of 48 check-in counters on the departure level. The modular design of the terminal offers the potential to add a further five jet bridges and 24 check-in counters in any future expansion.

Philippine architectural firm Budji+Royal designed the terminal, which incorporates ten arches in the roof design, resembling a wave shape and conveying a tropical feel, while the inside simulates a skeletal structure, a series of upturned boat hulls. Austrian spruce was used for the glulam beams, each of them spanning a 30m arch and installed individually over several weeks by specially skilled workers from Austria. The completed Terminal 2 won an award at the 2019 World Architecture Festival in the 'Completed Buildings – Transportation' category. Duty-free shops, fashion outlets and lounges

»

RIGHT: ***Departing runway 04 into Magellan Bay, under the watchful gaze of the Lapu-Lapu shrine***

"For the numerous tourists who visit the country each year, Mactan Cebu Airport is an ideal starting point for exploring the beautiful island world of the Philippines"

EVA AIR
B-16225
B-16225

BELOW: ***Eva Air operates daily services to Taipei/Taoyuan, in Taiwan, in this instance using Airbus A321-211, B-16225 (c/n 7101)***

Wearing 'I ♥ ASEAN' special colours, Airbus A320-216, RP-C8974 (c/n 3568) is one of the 25 A320s in the Philippines AirAsia fleet

ATR 72-500, RP-C6683 (c/n 700) is one of four ATR-72s belonging to Sunlight Air, which operates services to Busuanga, Siargao and Manila/Ninoy Aquino

are available to departing passengers, as are three hours of free Wi-Fi with 10gb of data.

In October 2024, Philippine holding company Aboitiz Equity Ventures took over operation of the airport from GMCAC and, though based in Manila, it has its roots in Cebu City. The final expansion phase was the opening of the second runway in January 2025 by current Philippine President Ferdinand 'Bongbong' Marcos Jr. Construction of the first parallel runway at a Philippine airport had begun in 2020, but the COVID-19 pandemic delayed its completion. The new runway, 04L/22R, has a length of 8,400ft and is used alongside the original 10,860ft-long, 1956-built runway, 04/22 – one is for departures and the other for arrivals – meaning that operations can be maintained without restrictions. Parallel operations are planned, increasing hourly flight movements from 20-22 to 30-40.

> **"The completed Terminal 2 won an award at the 2019 World Architecture Festival in the 'Completed Buildings – Transportation' category"**

SEAir International operates one of the few remaining 737-200s in the form of 46-year-old 737-2Q8C, RP-C4753 (c/n 21959) Muneera

LEADING EDGE
RP-C9962
9962

Leading Edge Air Services connects Cebu with Bantayan Island twice a week, using its two ATR 72-500s, in this case RP-C9962 (c/n 962)

The airport today

Adjacent to the terminals is Mactan Air Base, belonging to the Philippine Air Force. In addition to C-130 Hercules, GAF Nomads and CASA C295s, three 40-year-old Fokker F-27s are based here – of the few such variants that are still airworthy in the world. On the opposite side of the airfield is the general aviation terminal, home to several maintenance hangars and local flight schools. From here, the Philippine Leading Edge Air Services Corporation (LEASCOR) operates ATR 72 flights twice a week to Bantayan Island, just 25 minutes away in northern Cebu. Bantayan Island's small facility is also managed by the Mactan International Airport Authority and was recently expanded to accommodate the new ATR 72, with a longer paved runway and a small terminal building. This is a significant improvement when compared with the previous journey from Cebu City, which took four to five hours by car or bus and incorporated a ferry to Bantayan Island.

In addition to international flights, Mactan Cebu offers domestic connections to popular tourist islands such as Boracay (via Caticlan and Kalibo airports), Palawan (via Puerto Princesa, El Nido, and Busuanga airports), Camiguin, Siargao, and larger cities such as Davao and the capital, Manila. Filipino airlines include Philippine Airlines, Cebu Pacific and LEASCOR, as well as Philippines AirAsia (utilising Airbus A320s) and the smaller AirSwift (with ATR 42-600s and 72-600s acquired from Cebu Pacific) and Sunlight Air (operating ATR 72s). Widebody aircraft regularly fly to Mactan Cebu, operated by Qatar Airways from Doha, Emirates from Dubai, Eva Air from Taipei, and occasionally Cathay Pacific from Hong Kong.

Cargo flights operate frequently. SEAir International operates most days, carrying cargo for UPS in the evenings, and returning to Cebu the next morning with cargo from Clark International Airport. In addition to its recently acquired Boeing 737-300, the airline also operates one of the last remaining 737-200s in the form of 46-year-old 737-2Q8C, RP-C4753 (c/n 21959) *Muneera*. Skyway Airlines also visits Mactan Cebu occasionally with a classic Boeing 737-4M0(BDSF), RP-C4777 (c/n 29208). Air Hong Kong, part owned by DHL, operates a daily cargo connection from Hong Kong using its 14-strong fleet of A330-200Fs and -300Fs.

Untapped potential

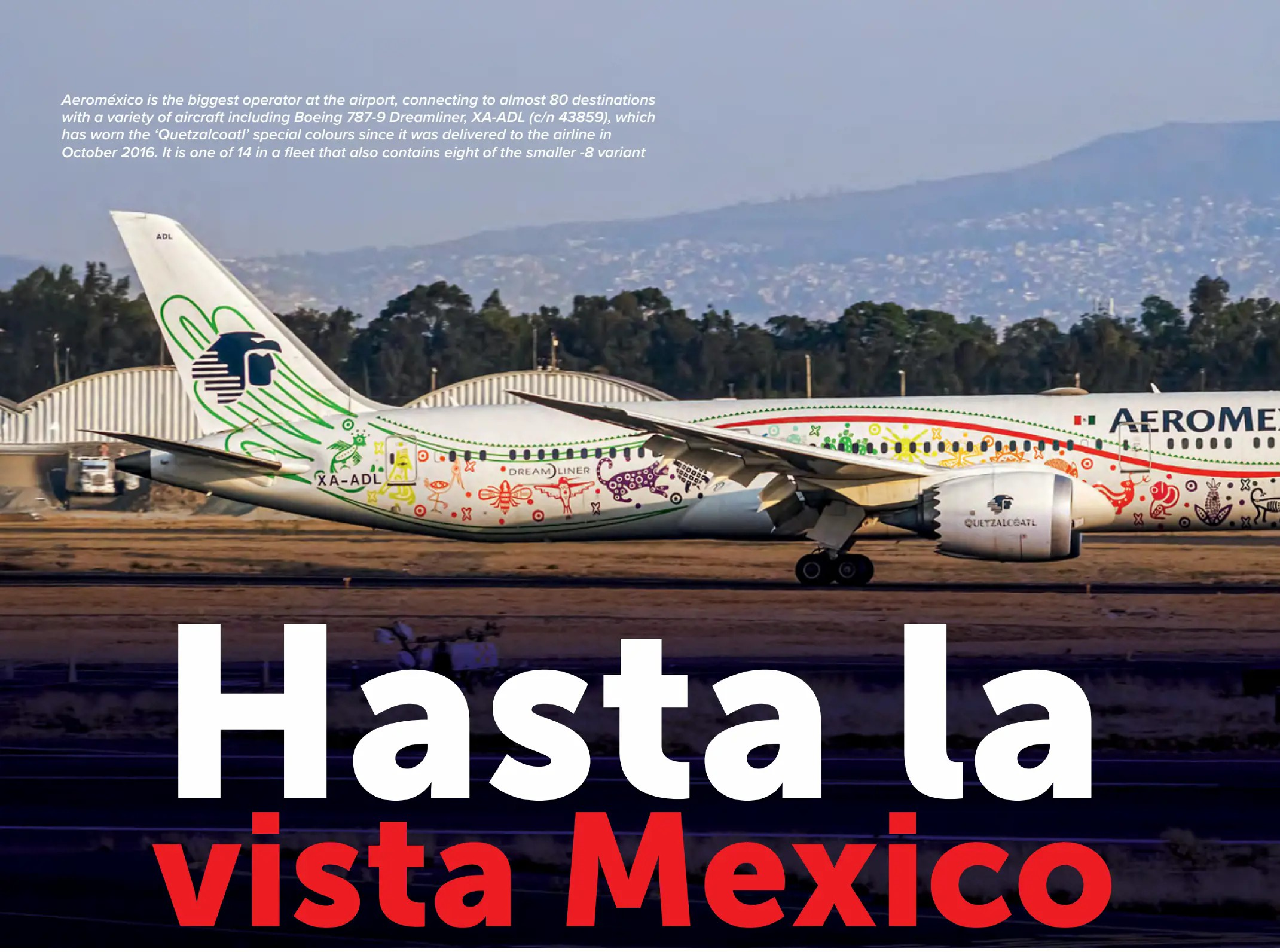
Although an Airbus A380 is yet to land at the airport, the unique Antonov An-225 has touched down. After super typhoon Yolanda wreaked havoc across the Philippines in October 2013, UR-82060 (c/n 19530503763) *Mriya* landed on November 12, 2013, after a flight from Zagreb, and delivered a 180-ton transformer for a power plant in Batangas.

For the numerous tourists who visit the country each year, Mactan Cebu Airport is an ideal starting point for exploring the beautiful island world of the Philippines. With 11.3 million people passing through the facility in 2024 against a design capacity of 19.7 million, a renovated domestic Terminal 1 and a seven-year-old Terminal 2, Mactan Cebu is well positioned for the future. The growth of aviation in the Philippines is demonstrated by the low-cost airline Cebu Pacific, which has a base at the airport. Not only did it open numerous new flight routes in 2024, but it also placed the largest order in the history of Philippine aviation – 152 Airbus aircraft valued at $24bn. It is therefore fitting that Mactan Cebu Airport was awarded 'Destination of the Year' by the Routes Asia 2025 jury in March in Perth, Australia. AW

RP-C3753
The way to go
L 04-22

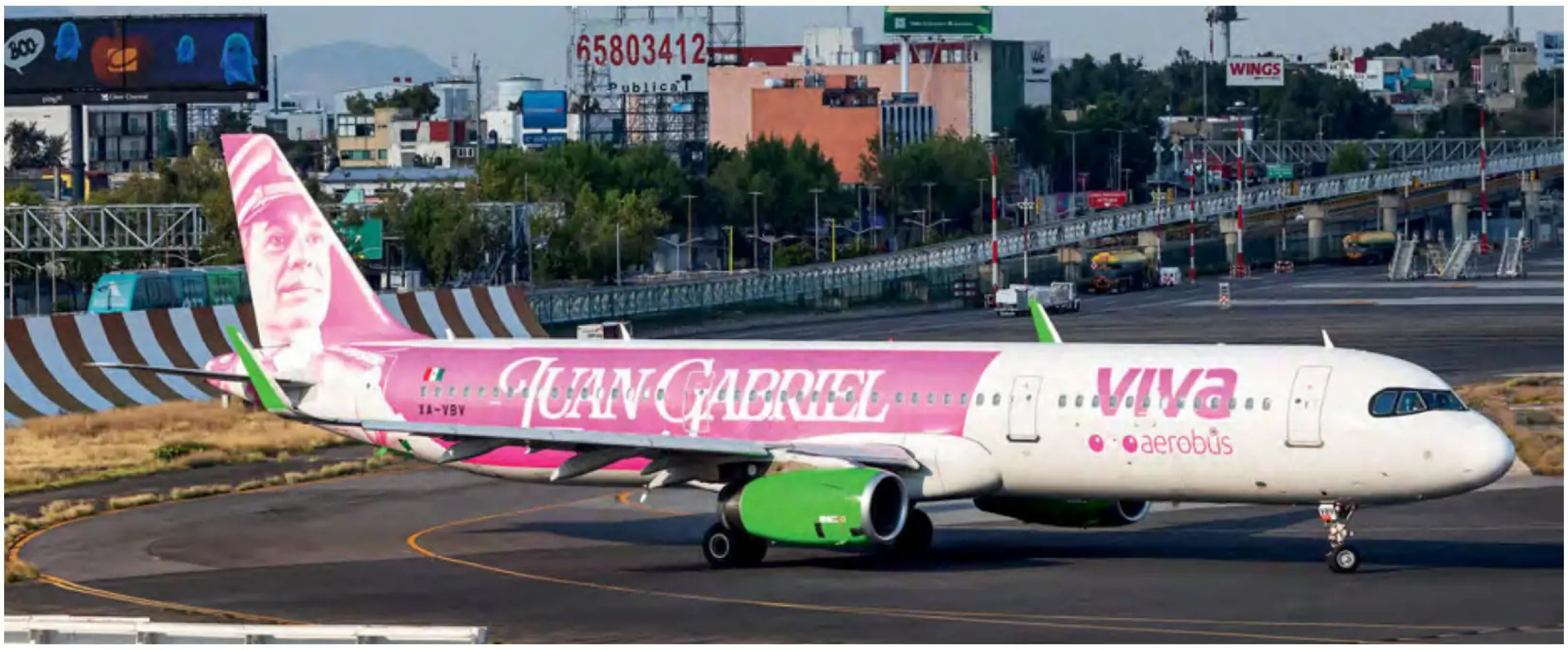
SEAir International's other aircraft is the colourful 737-330QC, RP-C3753 (c/n 23837), which began its working life with Condor in March 1988

The author would like to thank the public affairs department at Mactan Cebu International Airport Authority, and Jason Cabasa of the Cebu Airport Police for their assistance in preparing this article



Aeroméxico is the biggest operator at the airport, connecting to almost 80 destinations with a variety of aircraft including Boeing 787-9 Dreamliner, XA-ADL (c/n 43859), which has worn the 'Quetzalcoatl' special colours since it was delivered to the airline in October 2016. It is one of 14 in a fleet that also contains eight of the smaller -8 variant

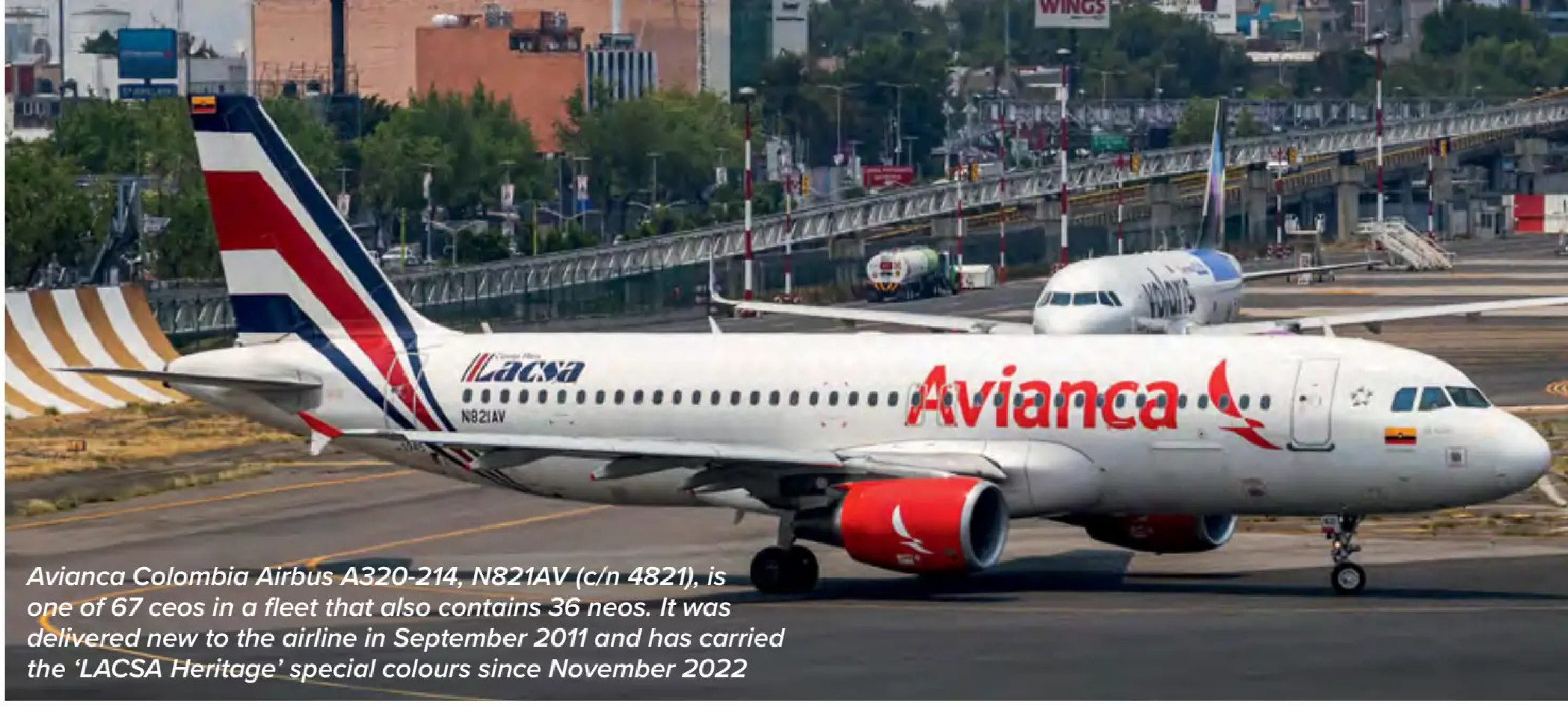
Hasta la vista Mexico



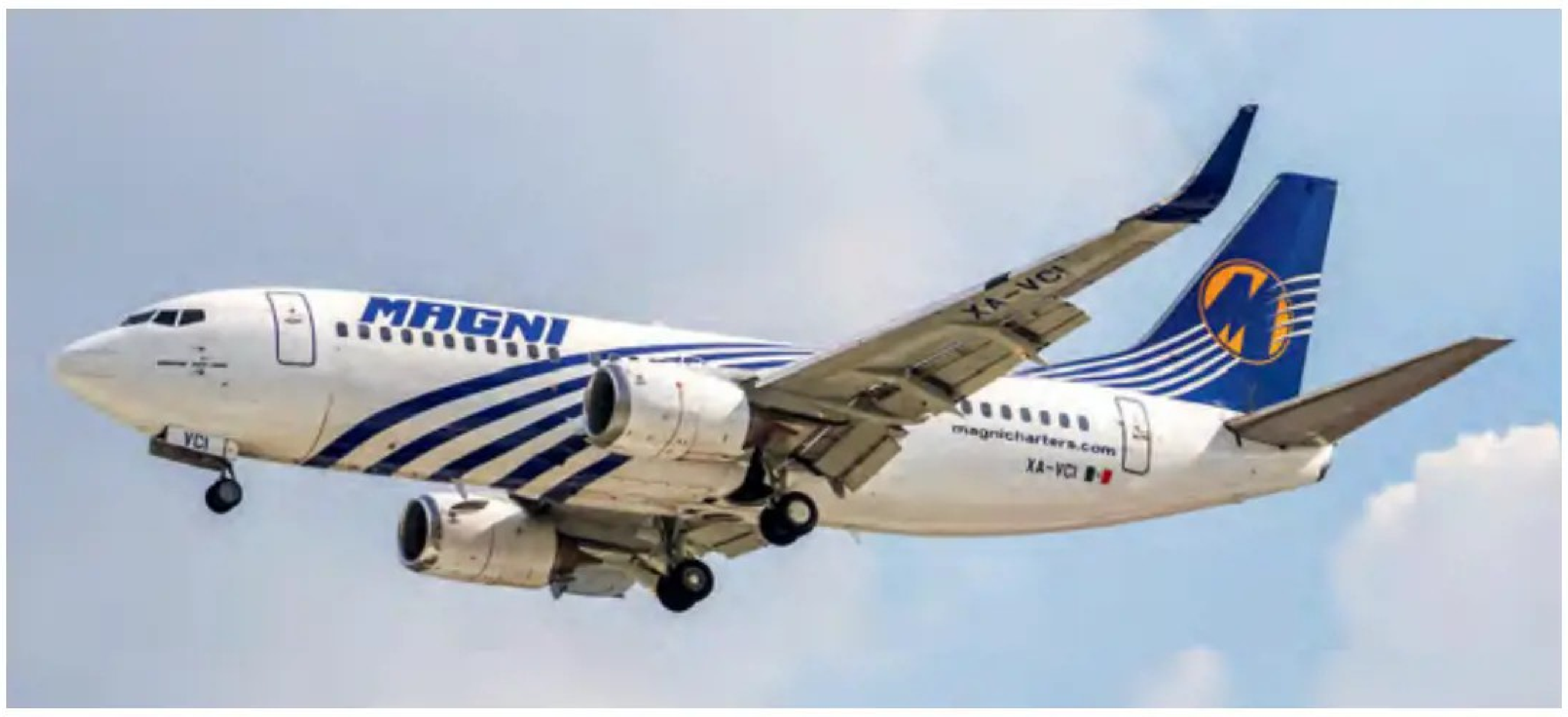
LEFT: *Viva Aerobus Airbus A321-231, XA-VBV (c/n 6219), has worn the special colours of Mexican singer-songwriter 'Juan Gabriel' since September 2023. The 11-year-old aircraft was originally delivered to Avianca Colombia in August 2014, before transferring to its current operator in December 2021*

LEFT: *Iberia Airbus A350-941, EC-OES (c/n 648)* Real Academia Española, *touching down after an 11-hour rotation from Madrid/Barajas. The two-year-old jet is one of 23 in the Spanish airline's fleet*

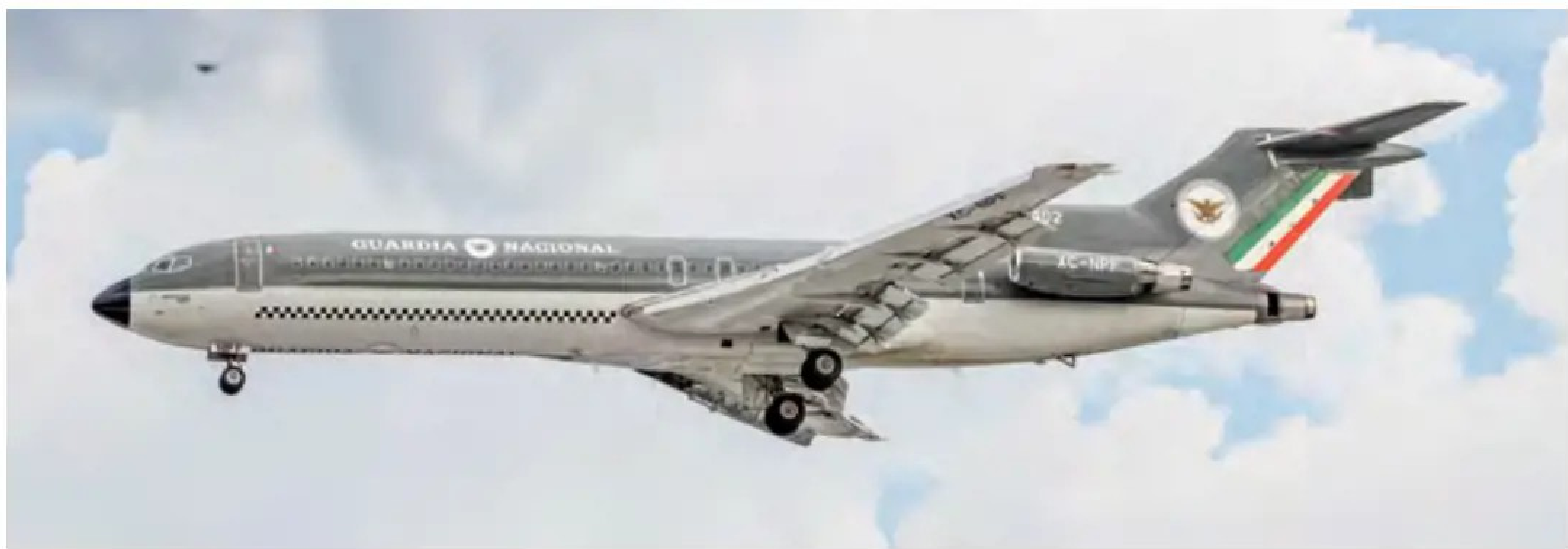
Andrik Garcia presents a selection of photographic highlights from his local hub, Mexico City International Airport Benito Juárez



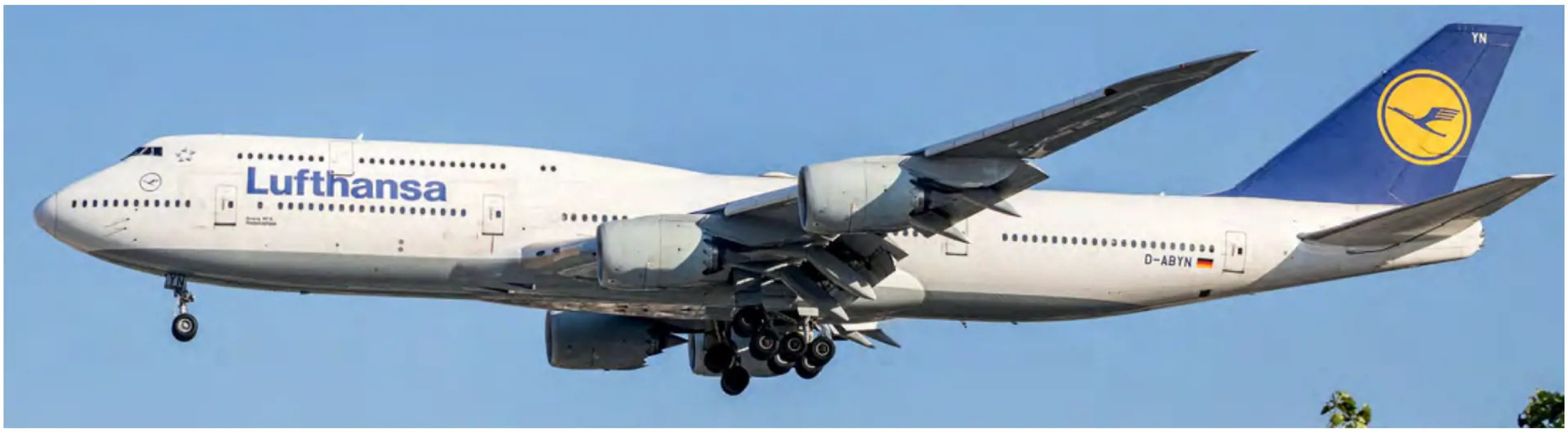
Avianca Colombia Airbus A320-214, N821AV (c/n 4821), is one of 67 ceos in a fleet that also contains 36 neos. It was delivered new to the airline in September 2011 and has carried the 'LACSA Heritage' special colours since November 2022

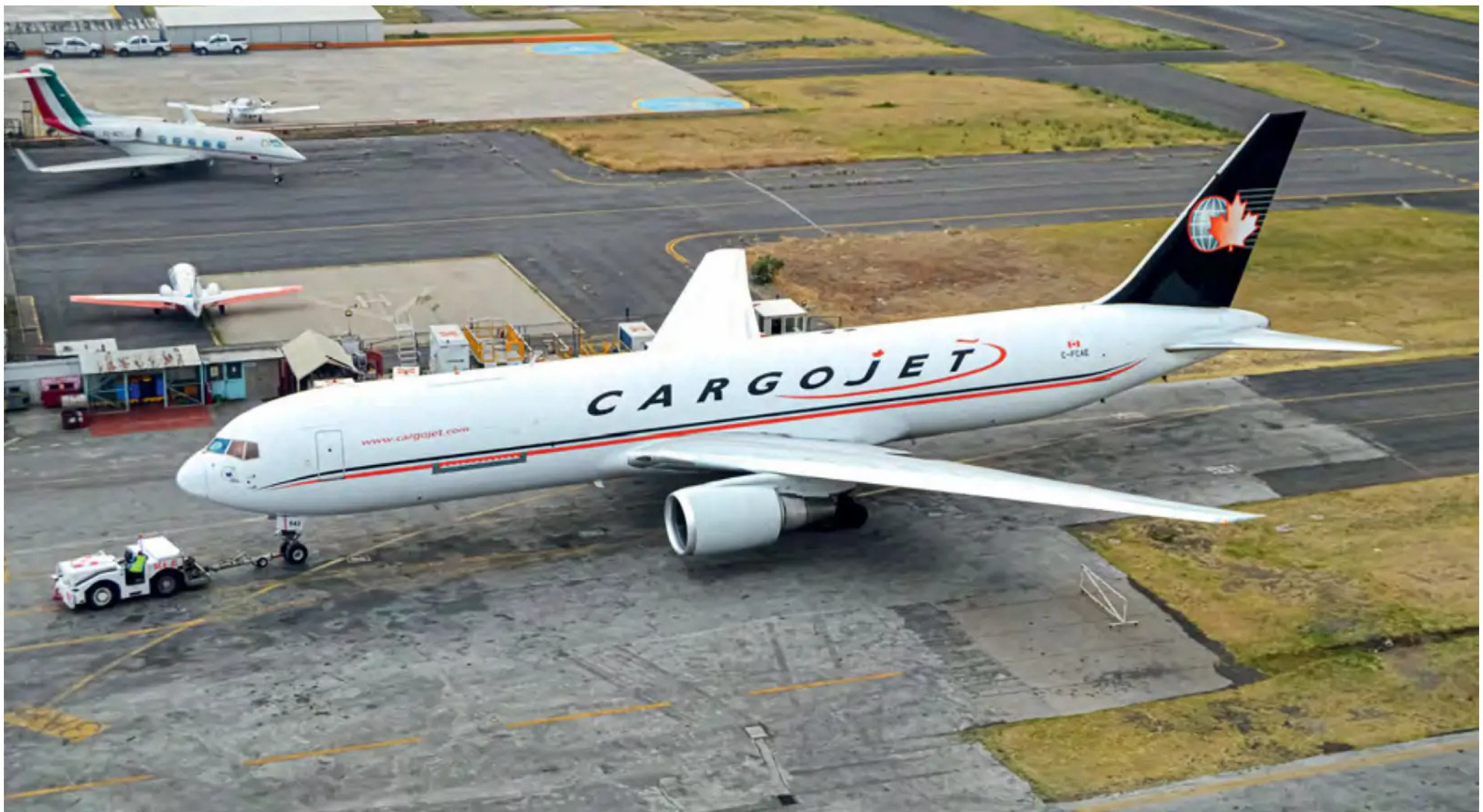


LEFT: *Among the ever-dwindling number of 737-300s still flying in a passenger configuration is Magnicharters 737-3H4, XA-VCI (c/n 27956), one of five in the fleet. The 143-seat single-class aircraft began life with Southwest Airlines in 1995, and has worn the special colours of Mexican wrestler 'Pentagón Jr.' since August 2022*



LEFT: *Belonging to the Mexican National Guard, Boeing 727-264, XC-NPF (c/n 22663), was first delivered to Mexicana in October 1981, and arrived at its current operator via a spell with the Mexican Police from 2002 to 2021*

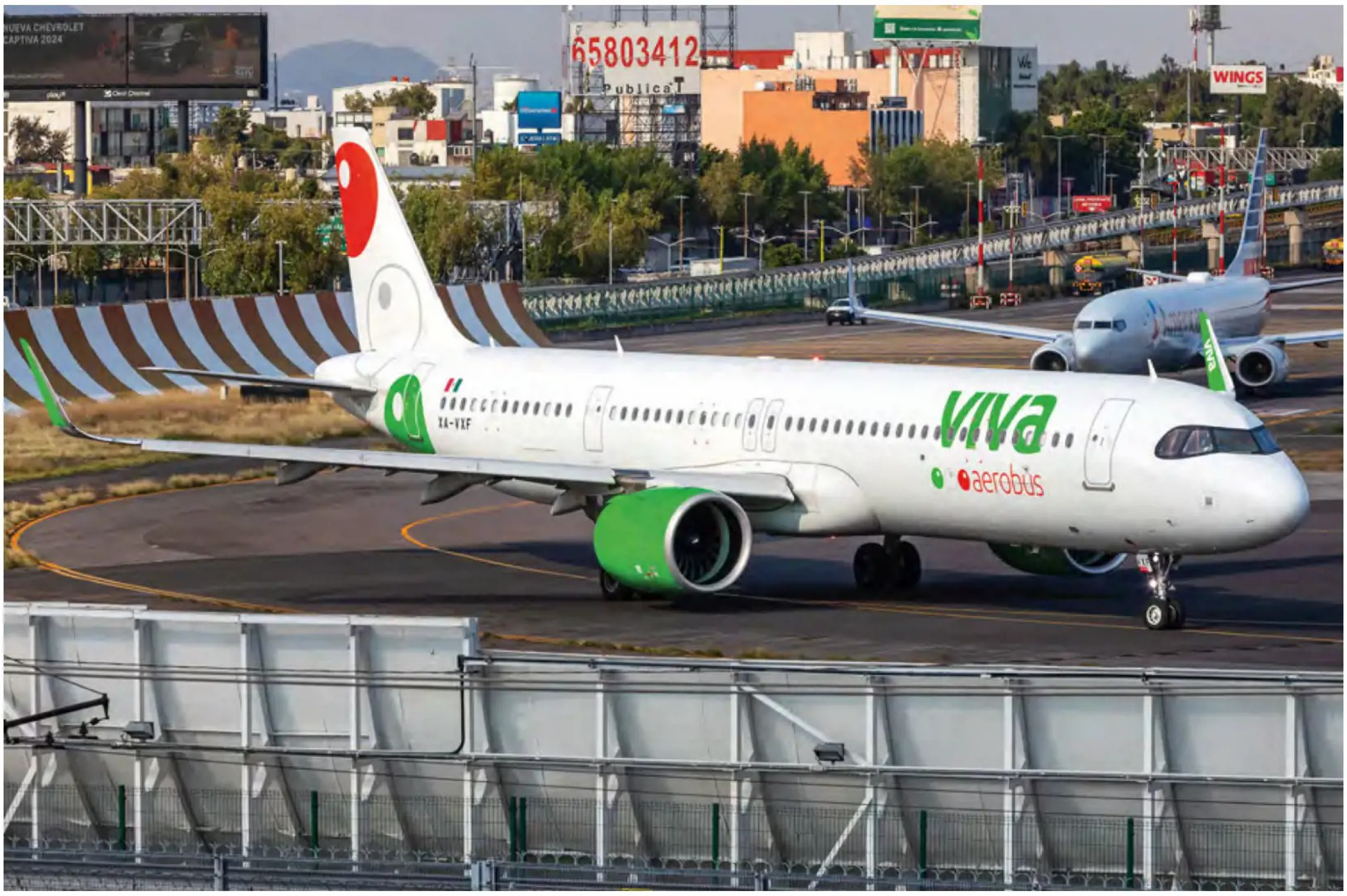




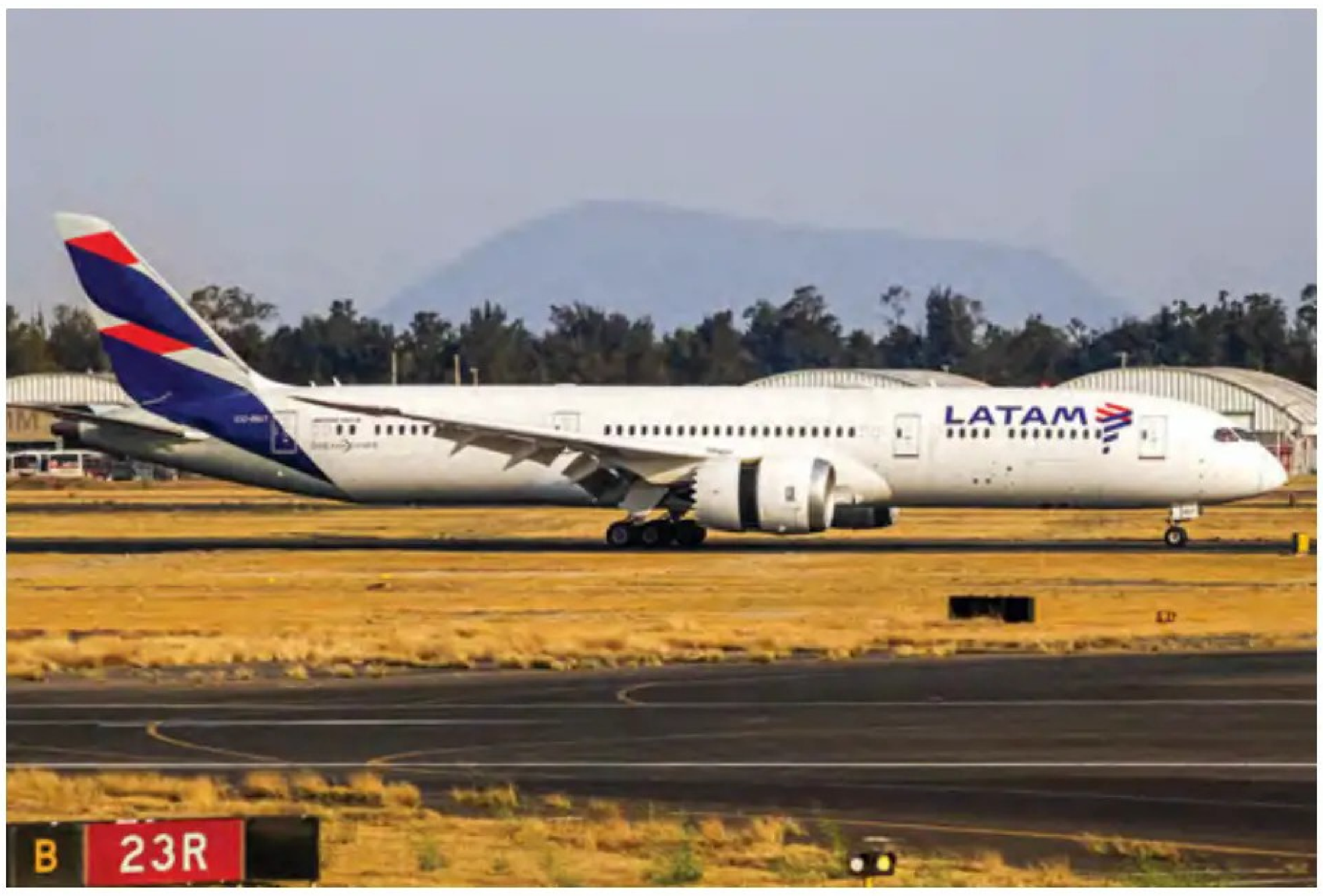
ABOVE: *Lufthansa Boeing 747-830, D-ABYN (c/n 37838) Niedersachsen, on short finals from Frankfurt, was delivered to the German carrier in March 2014, and is one of 19 in the fleet*

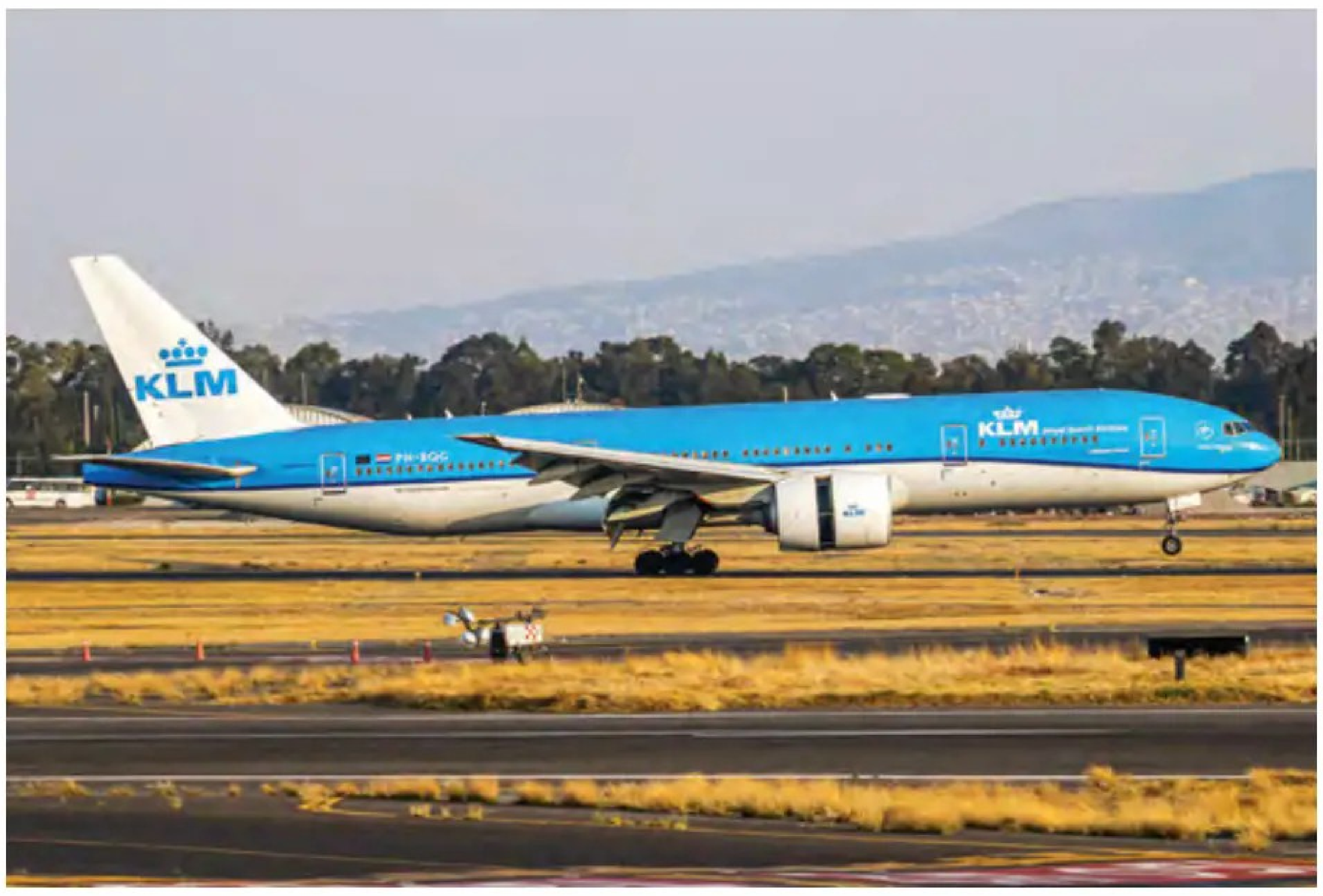
LEFT: *Cargojet Airways Boeing 767-375ER(BDSF), C-FCAE (c/n 24083), began its working life with Canadian Airlines in 1988, before moving to Air Canada in 2001. It was sold to its current operator in January 2020 and underwent a Bedek special freighter conversion shortly after in Tel Aviv*

RIGHT: ***Viva Aerobus Airbus A321neo, XA-VXF (c/n 10940), was delivered to the low-cost carrier in September 2022, and is one of 44 A321s in a fleet which also includes 73 A320s. In October 2024 the airline rebranded as Viva, and is still based at Monterrey General Mariano Escobedo International Airport***

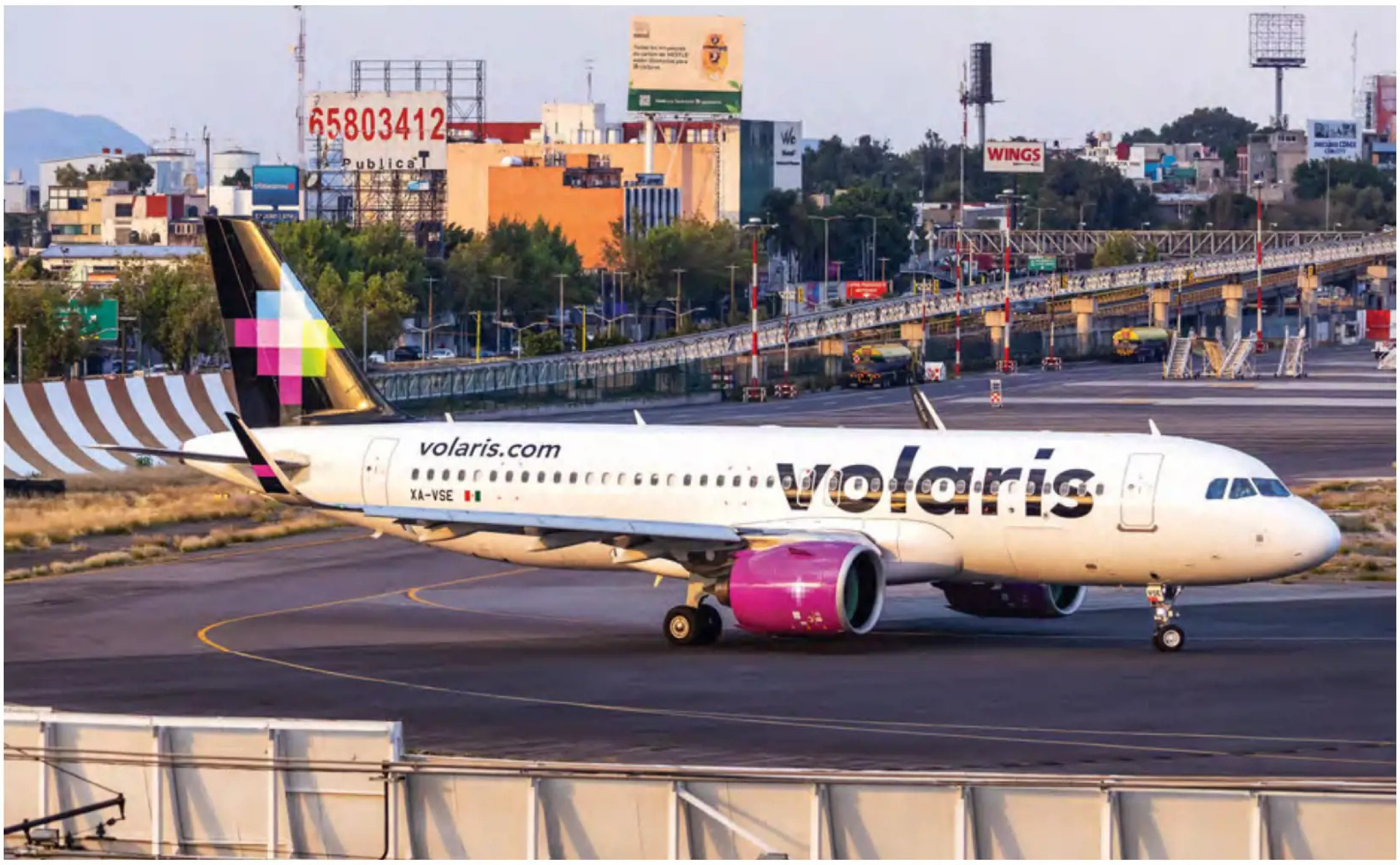


BELOW: ***LATAM Airlines Chile Boeing 787-9 Dreamliner, CC-BGT (c/n 38893), began its working life with Norwegian in 2018, wearing a Robert Burns tail and operating from London/Gatwick. After returning to its lessor Avolon and a period of storage, it joined its current operator in May 2022, and is one of 26 of the type in the Santiago-based airline's fleet***





ABOVE: ***KLM Royal Dutch Airlines Boeing 777-206ER, PH-BQG (c/n 32704), was delivered to the airline factory-fresh in April 2004. In its current three-class configuration it has 35 business, 24 premium economy and 229 economy class seats, and is one of 31 777s in a fleet comprising a total of 122 aircraft***

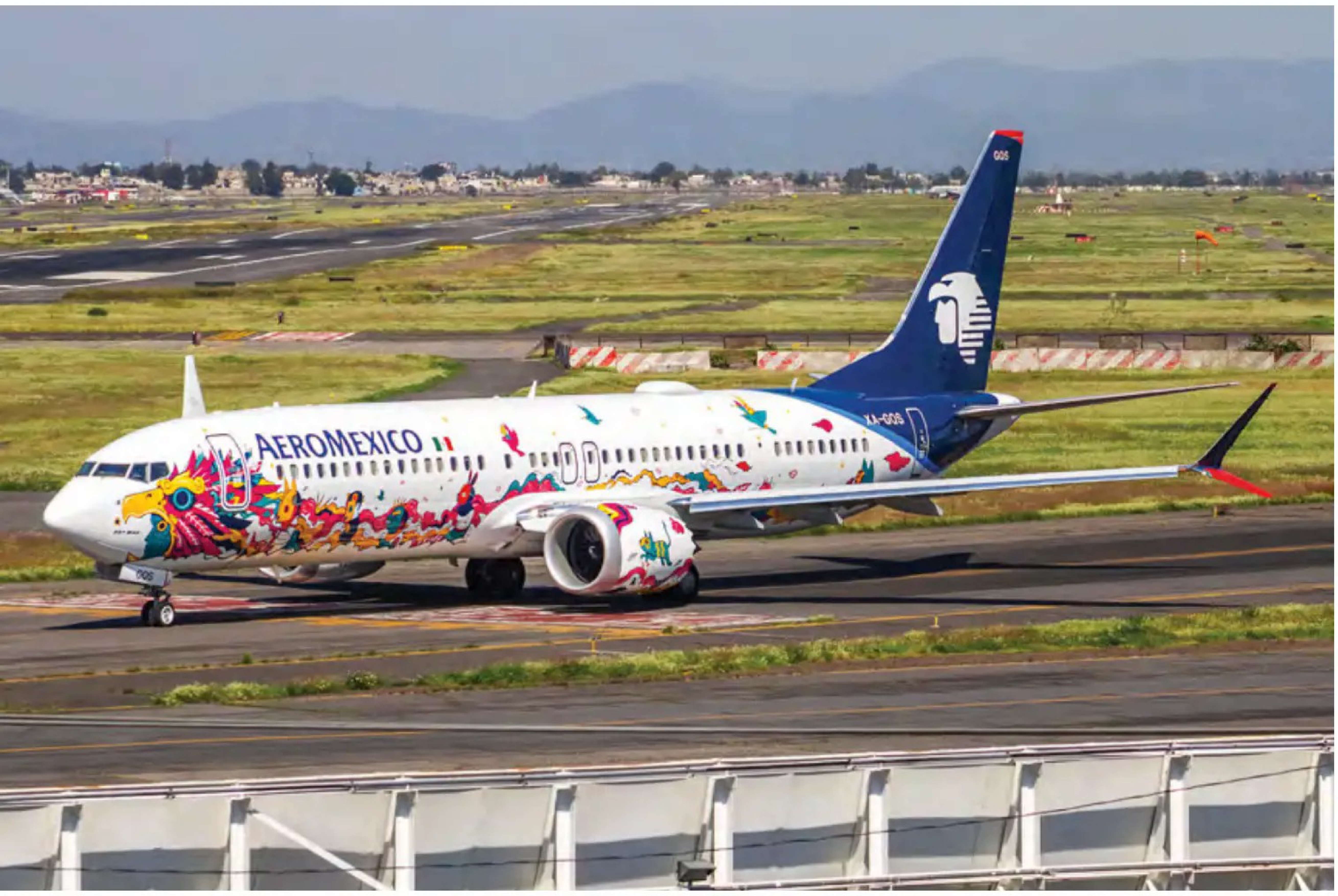


LEFT: ***Volaris Airbus A320neo, XA-VSE (c/n 9558), was originally slated for delivery to LATAM Airlines Brasil, but arrived at its current operator in October 2021 after a ferry flight from Hamburg/Finkenwerder to Mexico City via Keflavík and Gander. The all-economy 186-seat aircraft is one of 37 of the type on the ultra-low-cost carrier's books***

RIGHT: ***Turkish Airlines Boeing 787-9 Dreamliner, TC-LLG (c/n 65807), has been with the airline since January 2020 and is one of 71 Boeing widebodies in a fleet fast approaching 400 aircraft. The Istanbul-based airline currently operates nine flights per week to Mexico City***

Wamos Air Airbus A330-243, EC-NUI (c/n 963), has been with the airline since May 2022, although it was originally delivered to Aeroflot in November 2008. Seen here on final approach to the airport, it is one of five A330-200s in the Spanish charter carrier's all-A330 fleet of 13 aircraft

BELOW: ***Aeroméxico Boeing 737 MAX 9, XA-GQS (c/n 62935), was delivered to the airline in September 2024 wearing Kukulcán special colours which resemble the plumed serpent of Mayan mythology. The two-class aircraft, configured with 16 business and 165 economy seats, is one of 29 MAX 9s in a 737 fleet that also includes 34 -800s and 45 MAX 8s***



Mexico City International Airport

There has been an airfield at Llanos de Balbuena in Mexico City since 1910. A second runway opened in 1951, and at one time there were four strips, although the two shortest were sold off in the 1970s to facilitate the construction of social housing. Terminal 1 opened in 1958 and has been extended multiple times, while Terminal 2 opened in 2007 and was extended in 2020. Although the airport is located close to the city centre, that proximity effectively prevents any future expansion of the current site, and capacity is now towards its upper limit. Thirty airlines operate flights to more than 60 international and 40 domestic destinations, and it is a hub for Aeroméxico, Volaris and Viva. It is the busiest facility in Mexico, processing 45.3 million passengers in 2024, ranking it second in Latin America, just behind Bogotá/El Dorado with 45.8 million, but ahead of São Paulo/Guarulhos with 43.5 million.

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Dream Revolution
Boeing 787 Dreamliner
An Overview

Originally published in 2016 and updated in 2022, this 100-page guide to the wide-body jet has been further updated for 2025 to account for changes in technology, at Boeing, and in global aviation.

Produced by the team behind Airliner World, it details the revolutionary Dreamliner from concept through to service and looks at how the aircraft was developed, the innovations that Boeing incorporated into its design and how airlines use the type's economics to drive down operating costs.

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On a cold December evening in 1988, 259 people on board Pan Am Flight 103, along with 11 people in the small Scottish town of Lockerbie, were murdered in one of the UK's worst air disasters. Lee Cross tells the story of that fateful night and the investigation that is still ongoing almost 40 years later

Editor's note

Welcome to our *Air Accidents Uncovered* supplement, returning for a second time by popular demand.

In this edition, we explore three very different aviation accidents, each offering unique insights into the challenges and lessons that have shaped modern air safety. We begin with the dramatic events surrounding British Airways Flight 38, where a routine landing at Heathrow turned into a near disaster after both engines of the Boeing 777 unexpectedly rolled back mid-approach. We then revisit the tragic crash of Air France 296Q, the first fatal accident involving an Airbus A320, as recounted by Stephen Skinner. Finally, we examine the devastating bombing of Pan Am Flight 103 over Lockerbie in December 1988, which claimed 270 lives and remains one of the UK's worst air disasters.

As with our monthly Air Safety reports, this supplement focuses on the official investigations and the safety recommendations that emerged from them. By reflecting on these difficult moments, we aim to highlight the continuous improvements that have made air travel one of the safest modes of transportation. Behind every report lies a human story, and it's through understanding these experiences that we can truly appreciate the progress made. We hope you find this supplement both informative and thought-provoking.

FROZEN FATE ON FINAL APPROACH

A routine landing at Heathrow turned into a near disaster when both engines of British Airways Flight 38, a Boeing 777, unexpectedly rolled back. **Thomas Haynes** recounts the events of that day

"This is the captain. This is an emergency, evacuate, evacuate." The calm yet commanding voice of Captain Peter Burkhill echoed through the cabin of British Airways flight 38 shortly after the Boeing 777, with 135 passengers and 16 crew on board, crashed just short of London/Heathrow's runway 27L.

Moments earlier, the 777-236ER, registered G-YMMM (c/n 30314), had been on final approach when the unthinkable happened: less than a minute from touchdown, both engines rolled back and failed to respond to commands by the pilots for increased thrust. With only seconds to act, the crew managed to glide as far as possible, narrowly avoiding the A30, perimeter fence and ILS infrastructure before coming down just over 330m short of the runway. The widebody's landing gear collapsed and the aircraft slid to a halt abeam the threshold, miraculously still in one piece. After a swift evacuation, all on board survived, mostly unharmed, with the worst injury being a broken leg.

The incident on January 17, 2008, sent shockwaves through the aviation industry. It marked the first hull loss in the then 13-year service history of the 777, shattering the type's unblemished safety record.

How could a seemingly normal approach to landing go so wrong, so quickly? It was only during the investigation, led by the UK's Air Accidents Investigation Branch (AAIB), that the actions by the pilots were shown to have averted a tragedy and that the cause was likely a collection of obscure environmental and technical factors that converged to bring down the jet.

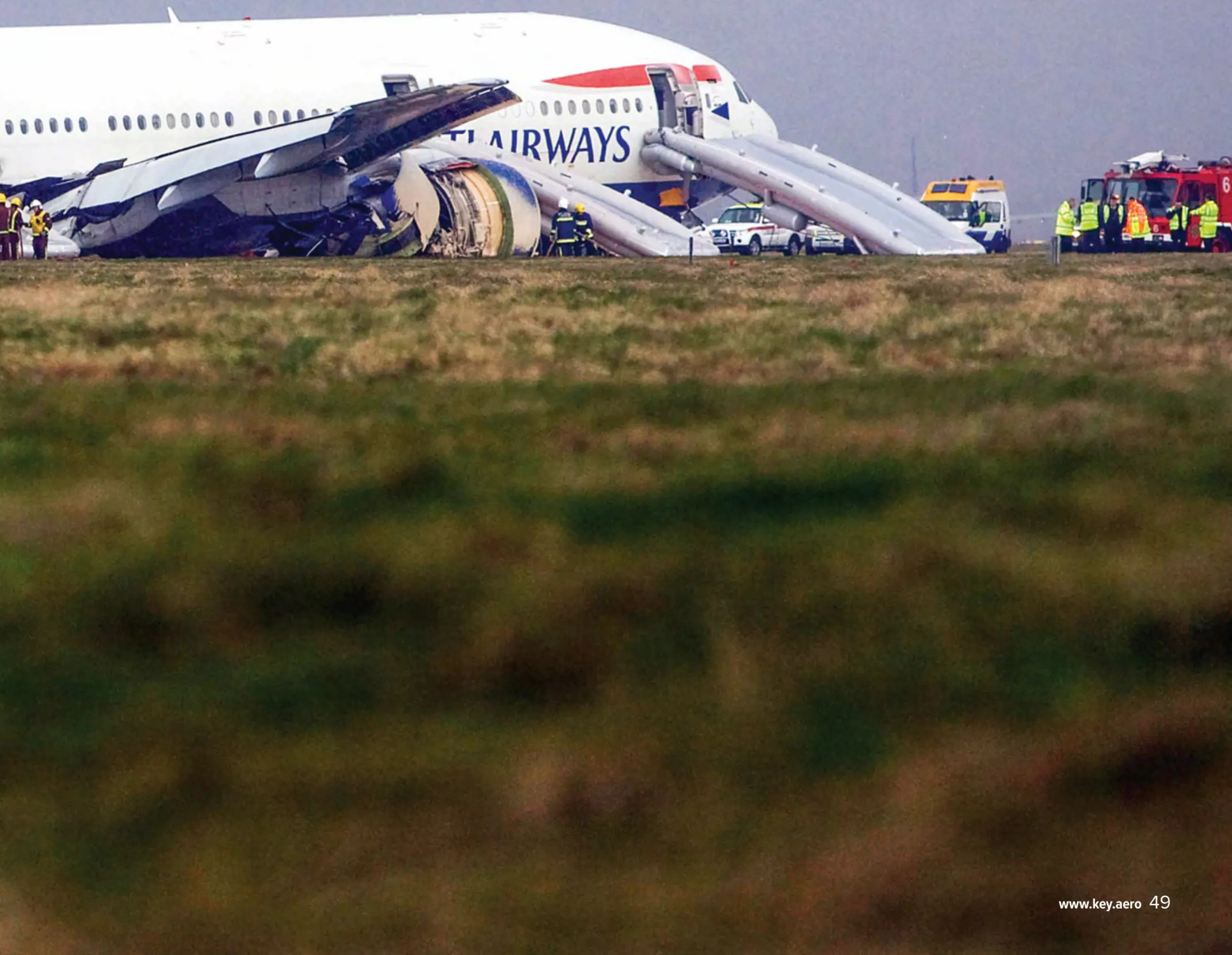
Accident in brief

Aircraft: Boeing 777-236ER
Registration: G-YMMM
Serial number: 30314
First flight: May 18, 2001
Flight number: BA38
Date of incident: January 17, 2008
Flight origin: Beijing/Capital
Flight destination: London/Heathrow
Occupants: 136 passengers, 16 crew
Survivors: 152

Business as usual

Up to that landing, everything about flight 38 was routine. A scheduled return service from Beijing, China, to Heathrow was bread and butter for the crew, airline and aircraft.

G-YMMM was the 42nd 777 to be delivered to BA, arriving from Seattle on May 31, 2001. The type – first introduced by the airline in November 1995 – had become a reliable workhorse. With two engines instead of four, and a spotless safety record, it was a revolutionary piece of »



BELOW: ***The 777 resting on its belly at the crash scene in the hours after the incident*** ALAMY STOCK PHOTO/PILCHARDS

Flight 38 was being flown by Boeing 777-236ER, G-YMMM (c/n 30314) CC BY-SA 4.0/FLICKR/G4SP

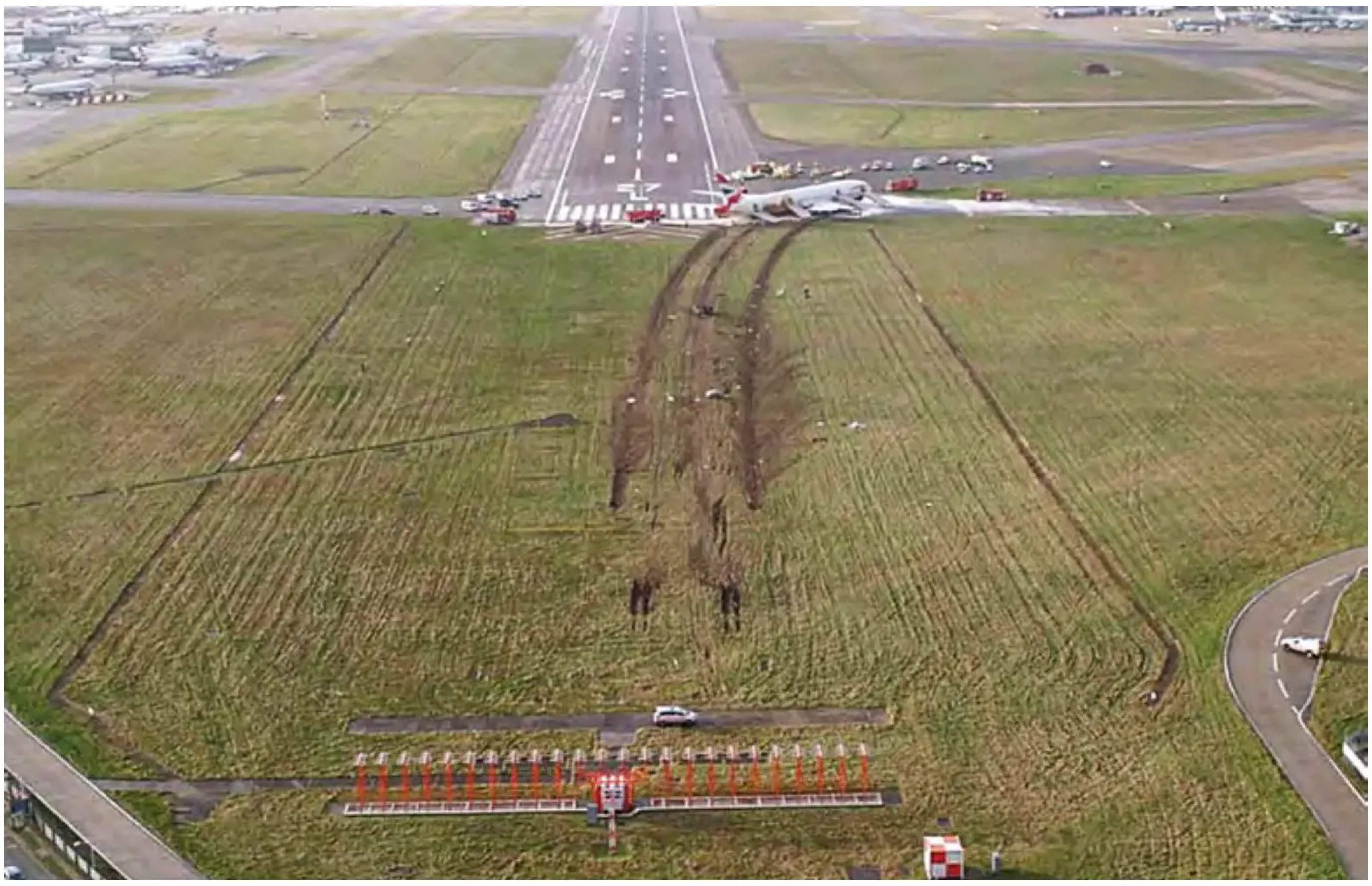
equipment that had reshaped the flag carrier's long-haul operation.

During the days prior to the incident, 'Mike Mike' had operated a return flight from Heathrow to Shanghai that departed on January 14 and arrived back at the London hub the following day just before 1700hrs. Routine maintenance, including a check of the fuel tanks for water contamination, was carried out overnight. The widebody re-entered service on the afternoon of January 16, arriving in Beijing on January 17.

The crew for flight 38 comprised three pilots: 43-year-old Captain Peter Burkhill, 41-year-old Senior First Officer (SFO) John Coward and 35-year-old First Officer (FO) Conor Magenis. The trio were experienced aviators with thousands of hours each on type – the captain had more than 8,400, while the SFO boasted 7,000 hours. FO Magenis – who had just over 1,100 hours on type – was acting as a cruise relief pilot for the flight. The 13-strong cabin crew team was led by cabin services director Sharron Eaton-Mercer.

Cold-weather considerations

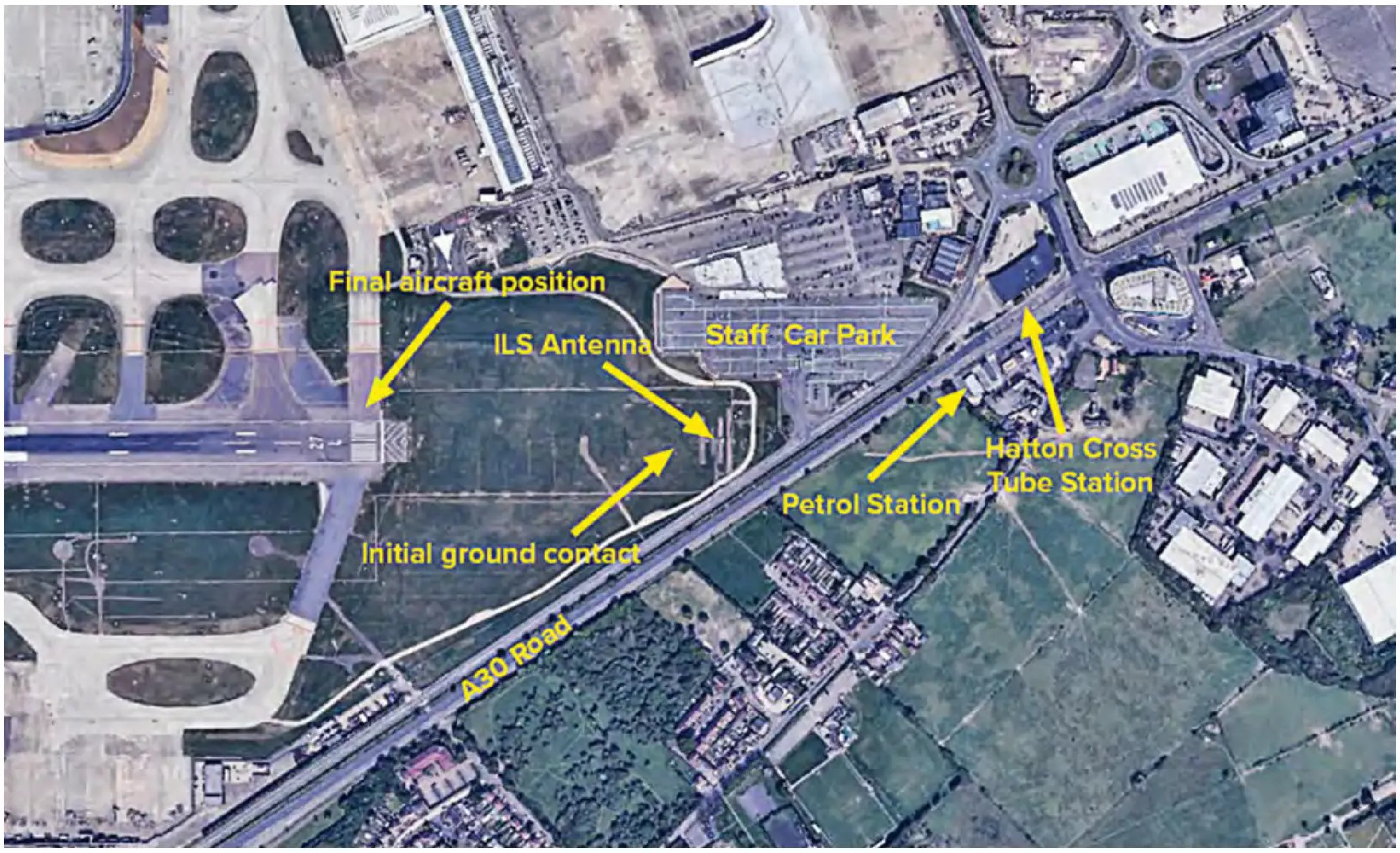
Before departing Beijing, the crew reviewed the flight plan for the journey home. It called for a routing that took the jet through Chinese, Russian and Scandinavian airspace, with an initial cruise altitude of 34,100ft with a descent to 31,500ft because of predicted 'Extreme Cold' around the border of China and Mongolia. The crew were briefed that they should monitor the fuel temperature en route. Jet A-1, the type of fuel used in the 777 and most commercial airliners around the world, has a freezing temperature of -47°C.



ABOVE: ***The aircraft impacted the ground just inside the perimeter of the airport and came to a halt abeam the runway 27L threshold*** AAIB/METROPOLITAN POLICE ASU

BRITISH AIRWAYS
BRITISH AIRWAYS

LEFT: ***The crew of flight 38 including (from l to r) SFO John Coward, Captain Peter Burkhill and cabin services director Sharron Eaton-Mercer attended a press conference the day after the crash, along with BA CEO Willie Walsh*** GETTY IMAGES/ CATE GILLON



TOP RIGHT: ***A map showing the key locations relevant to the incident*** GOOGLE MAPS/KEY-THOMAS HAYNES

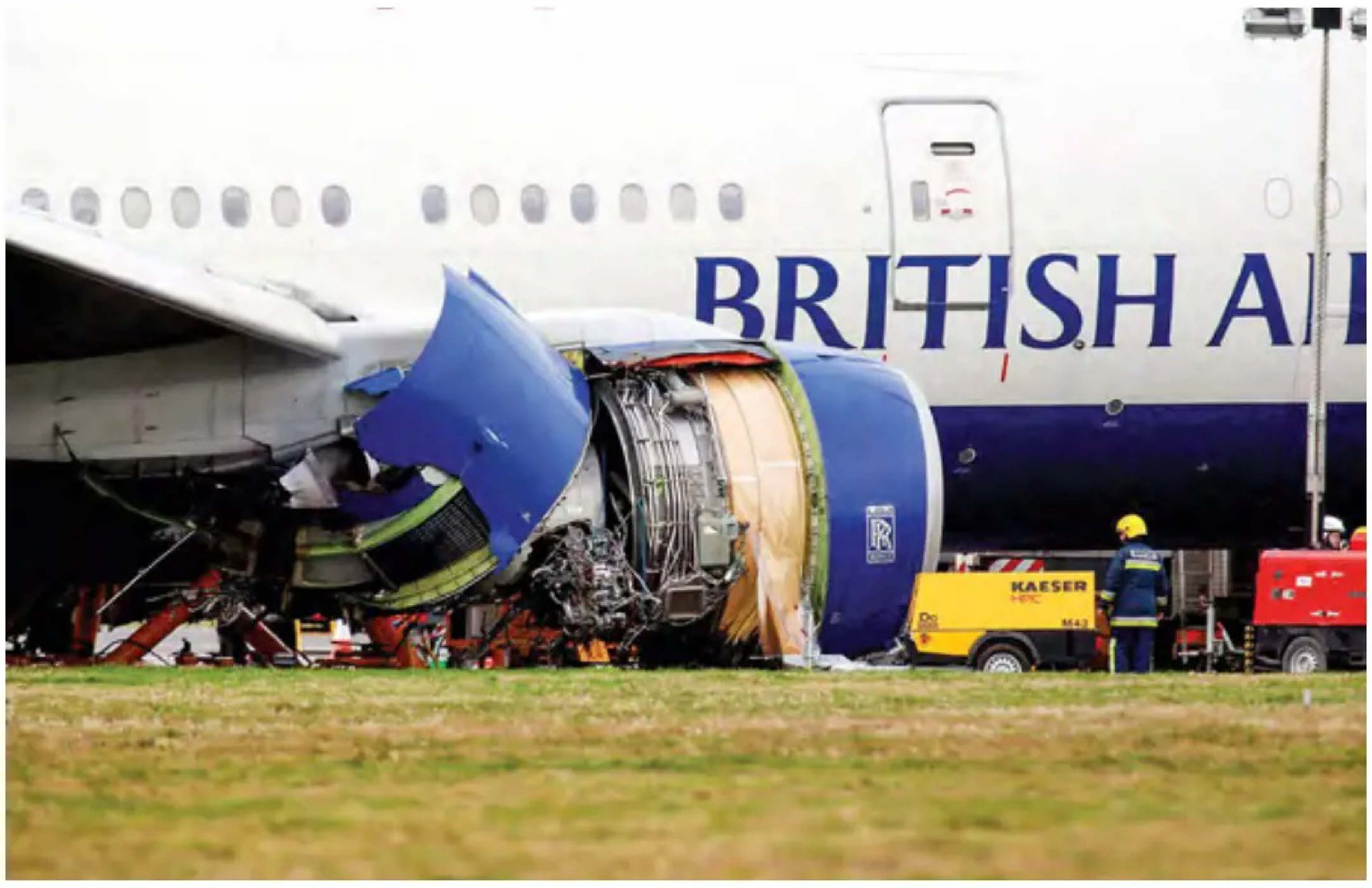
Start-up, taxi and take-off were all uneventful, the report said. Air traffic control (ATC) requested that flight 38 climb to an initial cruise altitude of 34,800ft and the crew accepted this, noting that the outside air temperature was slightly higher than forecast.

After passing about 350nm north of Moscow, the jet step climbed to 38,000ft. While transiting the area between the Ural mountains and eastern Scandinavia, it passed through a region of particularly cold upper winds, with temperatures as low as -74°C. While over Sweden, a final climb was made to 40,000ft. Despite the extreme outside air temperatures, the minimum recorded fuel temperature en route was -34°C, well above Jet A-1's freezing point.

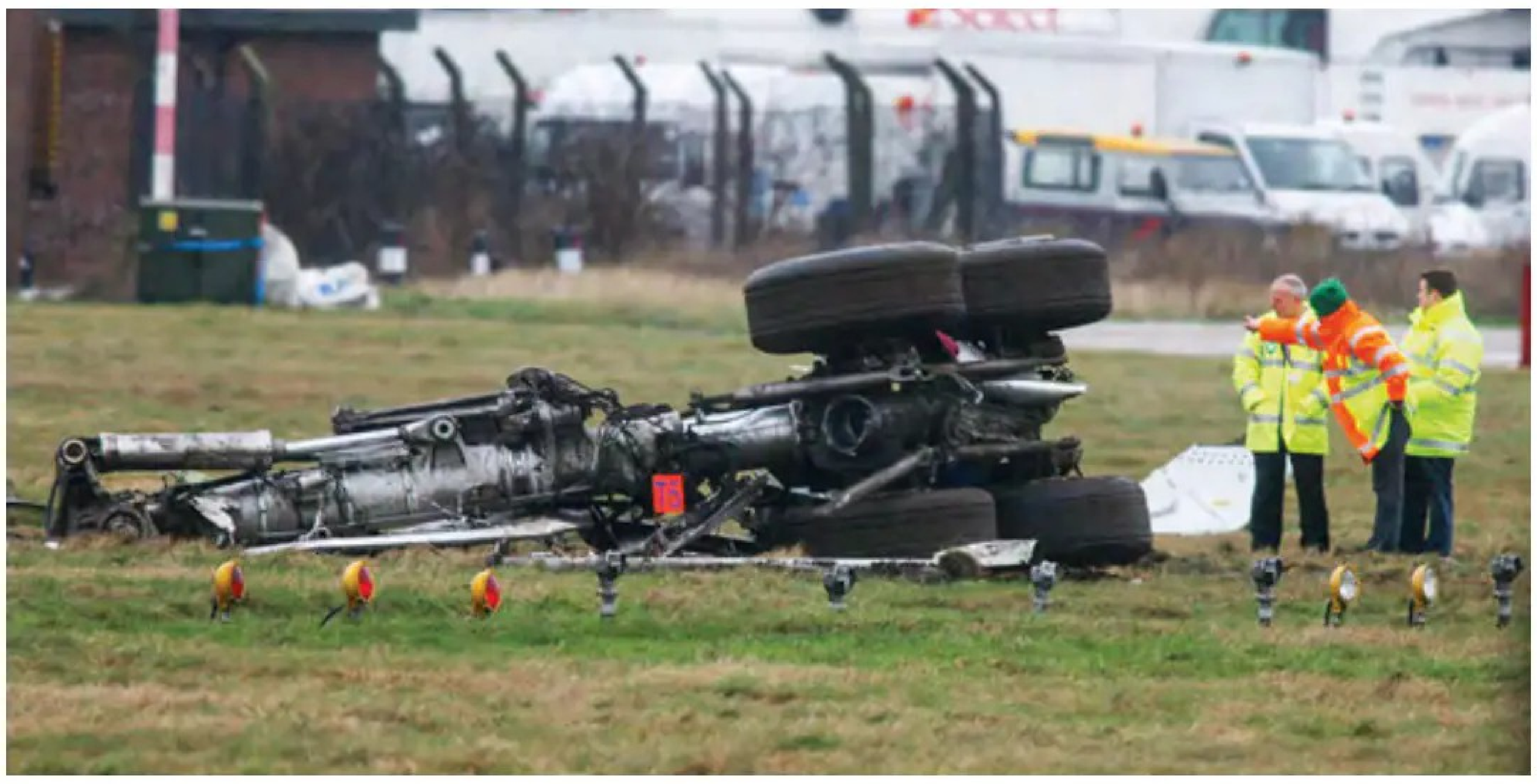
The flight continued uneventfully. The captain was pilot flying (PF) during the descent from 40,000ft and the aircraft entered a hold at the Lambourne VOR at 11,000ft, remaining there for approximately five minutes, during which time it descended to 9,000ft. The widebody was then vectored for the ILS approach to runway 27L at Heathrow, subsequently stabilising on the ILS with the autopilot and autothrottle engaged.

Final approach

At 1,000ft above aerodrome level (AAL) and with 83 seconds before touchdown, 'Mike Mike' was fully configured for landing, with the landing gear down and FLAPS 30 selected. SFO John Coward took over control at approximately 800ft, in accordance with the briefed procedure, placing the captain in a pilot monitoring (PM) role. Shortly after Coward had assumed control, the autothrottles commanded an increase in thrust from both engines.



RIGHT: ***The aircraft's engines were severely damaged after the landing gear collapsed on the first impact*** ALAMY STOCK PHOTO/ STEVE PARSONS



RIGHT: ***The right-hand main landing gear broke off during the crash*** ALAMY STOCK PHOTO/TRINITY MIRROR/ MIRROR PIX

The powerplants – a pair of Rolls-Royce Trent 800s – responded initially, but at a height of about 720ft, 57 seconds before touchdown, the thrust on the right-hand engine reduced. Some seven seconds later, the thrust on the left-hand dropped to a similar level. The report emphasised that the engines had not failed and were still producing power above flight idle, but significantly less than the commanded level. The SFO noted that the lever positions had begun to 'split'.

Passing 500ft, flight 38 was cleared to land by Heathrow ATC, which the crew acknowledged. At 430ft, the captain announced that the approach was stable, to which the SFO responded "Just", the »

ABOVE: ***In total, 300,000 litres of water and 17,000 litres of foam were used by the airport fire service*** ALAMY STOCK PHOTO/PA IMAGES/ ANDREW PARSONS

LEFT: ***All eight slides deployed successfully and passengers and crew were able to make an efficient evacuation of the aircraft*** ALAMY STOCK PHOTO/ ASSOCIATED PRESS

cockpit voice recorder (CVR) revealed. Some seven second later and less than 30 seconds before touchdown, Coward noticed the speed had dropped below the target of 135kt and, clearly confused at the situation being presented, stated: "What's happened to the speed... Yeah, but look... What's going on?"

Speaking to the BBC in 2010 following the release of the investigation report, Peter Burkhill said: "[My] first thought was of total disbelief – this just can't be happening. This is a very modern aircraft. The 777 has got many back-up systems."

In an effort to get some power, Coward pushed both thrust levers fully forward, but it had no effect. Baffled at the lack of response, he retarded the thrust levers about halfway and then advanced them again – still, nothing happened.

LEFT: ***The aircraft came to rest approximately 372m from the first impact point, on a tarmac area on the right-hand side of the runway threshold*** GETTY IMAGES/ CATE GILLON

RIGHT: ***G-YMMM was recovered to a hangar at Heathrow using cranes and moving platforms*** ALAMY STOCK PHOTO/ ASSOCIATED PRESS

The airspeed continued to reduce as the autopilot tried to maintain the ILS glideslope, increasing pitch to counteract the reduction in thrust. At 115kt, the 'AIRSPEED LOW' warning sounded in the cockpit, along with the master caution warning. Captain Burkhill realised that in its current energy state, the aircraft would likely not reach the runway and instead would come down "around about the Hatton Cross area", just short of the airport perimeter where a London Underground station, catering buildings and a petrol station were located. In an attempt to extend their glide range, Burkhill decided to reduce the flap setting by 5° to FLAP 25. This decreased the level of drag on the aircraft, but also increased the stall speed from 104kt to 106kt. He also moved the engine start switches to the 'START' mode.

The airspeed continued to drop and, by 200ft, had fallen to 108kt – the aircraft was now on the edge of a stall. The stick shaker – a device that vibrates the control column in order to warn the pilots of an approaching stall – began to operate about ten seconds before touchdown. In response, Coward pushed the control column forward to reduce the angle of attack, which caused the autopilot to disconnect. He was now hand-flying the crippled jet.

Approximately three seconds before impact, Burkhill made an emergency call on the tower frequency: "MAYDAY, MAYDAY, SPEEDBIRD, SPEEDBIRD, 95, 95." Behind the calm voice of the captain, an automated "PULL UP" callout can be heard in the cockpit, indicating that the ground proximity warning system (GPWS) had been triggered and that the crash was merely seconds away. Notably, in the face of an imminent crash, Burkhill mistakenly gave the wrong flight number – the correct callsign being Speedbird 38. Speaking on a 2022 NATS podcast, Adam Spink, who was the supervisor in the ATC tower at the time of the crash, said the reason for the incorrect callsign could have been due to the fact that, at the time, the number 95 was being used in BA flight simulator training sessions when crews were practicing emergencies.

The widebody struck the ground in the grass undershoot area of 27L, approximately 330m short of the paved runway surface and, crucially, 110m inside the airfield perimeter fence – equivalent to only 1.7 fuselage lengths. The rear wheels of the main landing gear hit first, followed by all the main wheels as the trucks tilted forward. The maximum vertical acceleration spiked at 2.9G. The rear part of the fuselage also made contact with the ground as the aircraft continued forward. The jet then bounced back into the air and became airborne again.

The landing gear was severely damaged by the first impact, with the left main landing gear subsequently collapsing and the right main landing gear separating from the aircraft. The airliner came back down again 53m after the initial impact, this time settling on its belly, causing the engine nacelles to make contact with the ground along with the nose landing gear, which immediately collapsed. The aircraft came to rest approximately 372m from the first impact point on a tarmac area just to the right-hand side of the runway threshold.

In the cockpit, Burkhill attempted to make an evacuation announcement, but mistakenly transmitted the instruction on the tower frequency. He was corrected immediately by the controller, then switched over to the cabin PA system, repeating: "This is the captain. This is an emergency. Evacuate, evacuate."

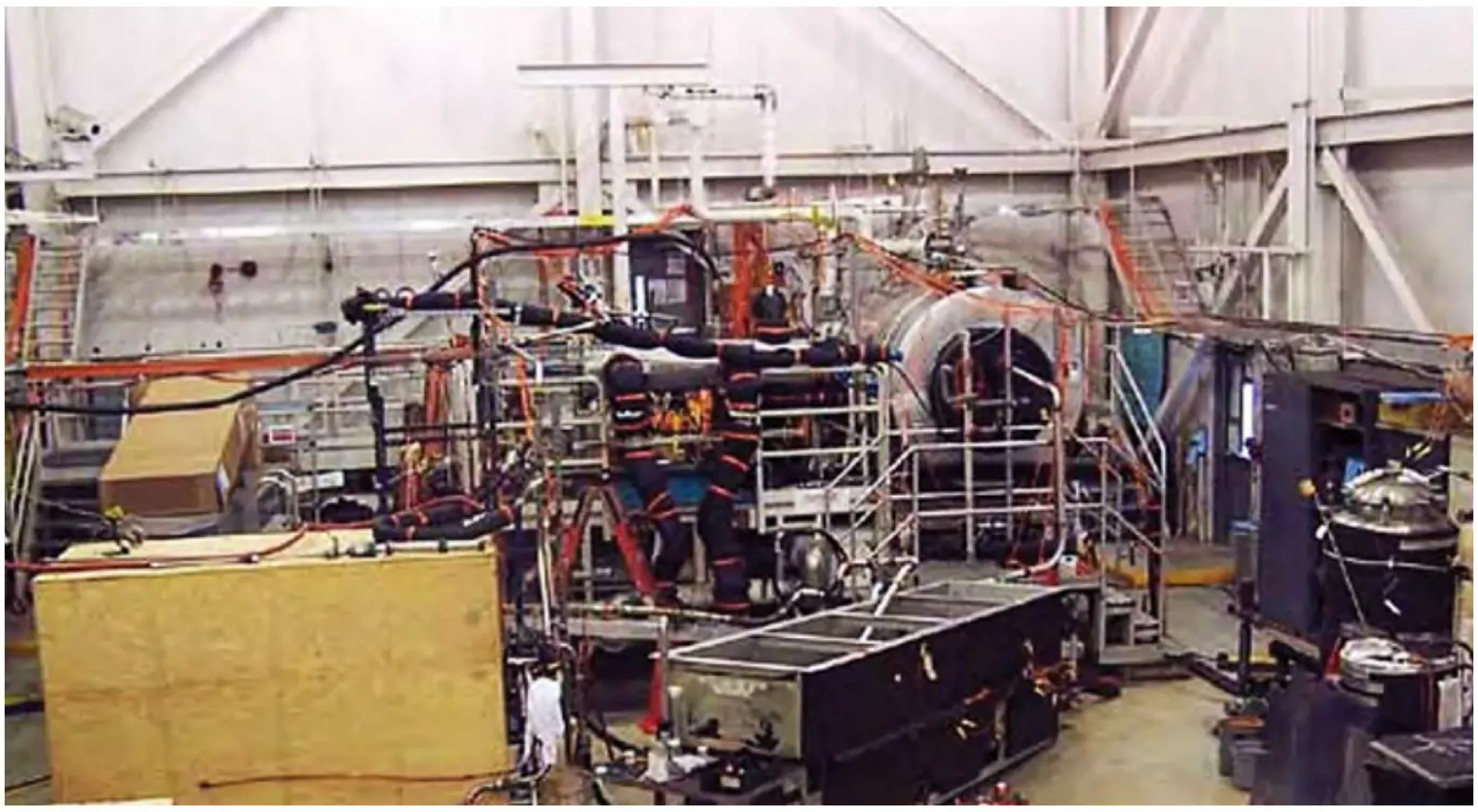
As the incident unfolded so rapidly, there was no time to alert the passengers or cabin crew to the crash before it happened, so no brace call had been made. However, once the evacuation announcement was delivered, it got underway smoothly.

ATC made a crash call 13 seconds after the first impact and fire crews were on the scene one minute and 43 seconds later – just within two minutes of the incident.

Despite ruptured fuel tanks and a damaged passenger oxygen system, thankfully there was no fire. In total, 300,000 litres of water and 17,000 litres of foam were used by the airport fire service.

All eight escape slides deployed normally and the report noted that the evacuation was carried out efficiently, with clear instructions from the cabin crew. Some passengers attempted to retrieve baggage and one passenger even climbed back up a slide to re-enter the aircraft to get their personal belongings.

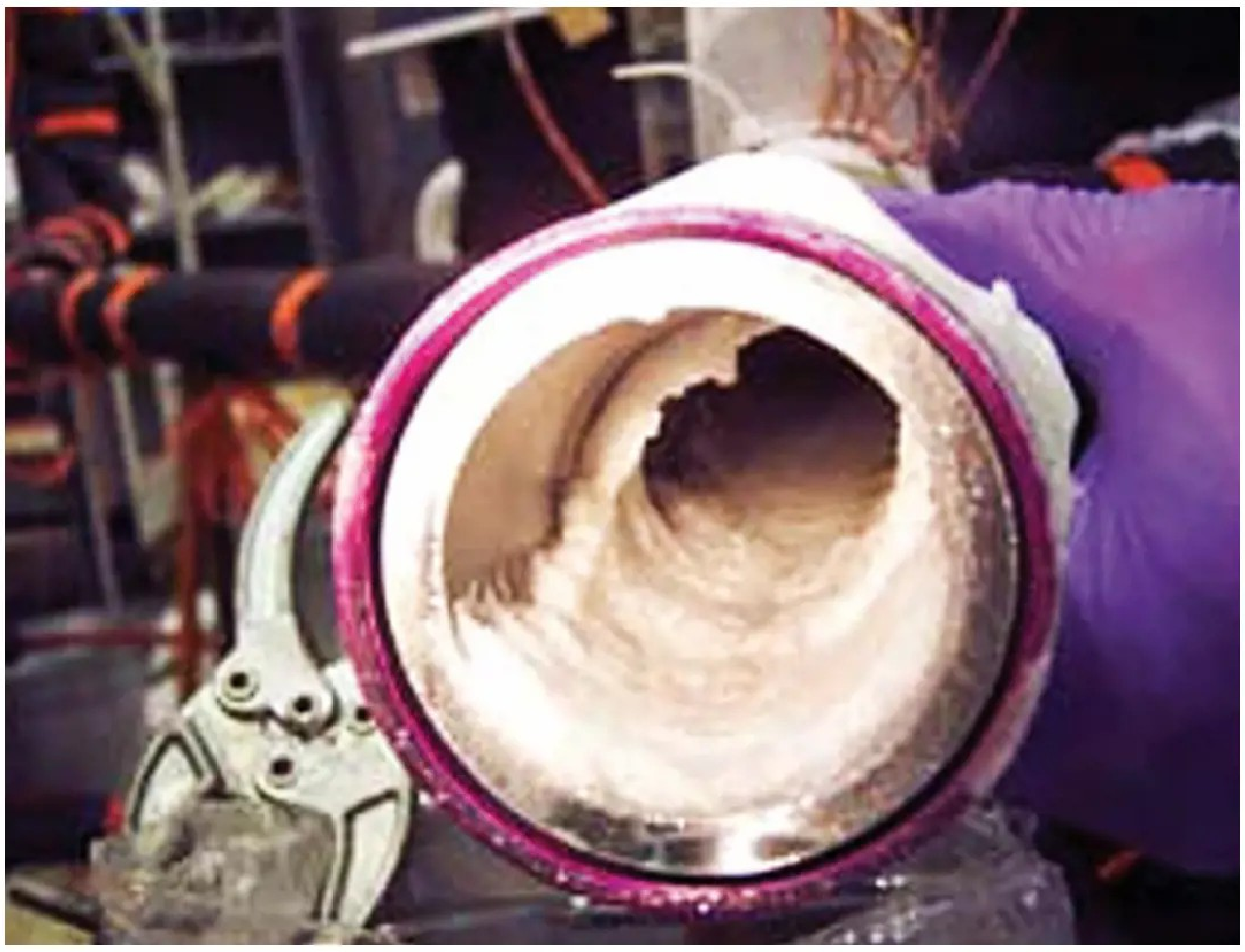
BELOW: ***Air accident investigators constructed a fuel test rig in order to understand the nature of the fuel flow failure on flight 38*** AAIB



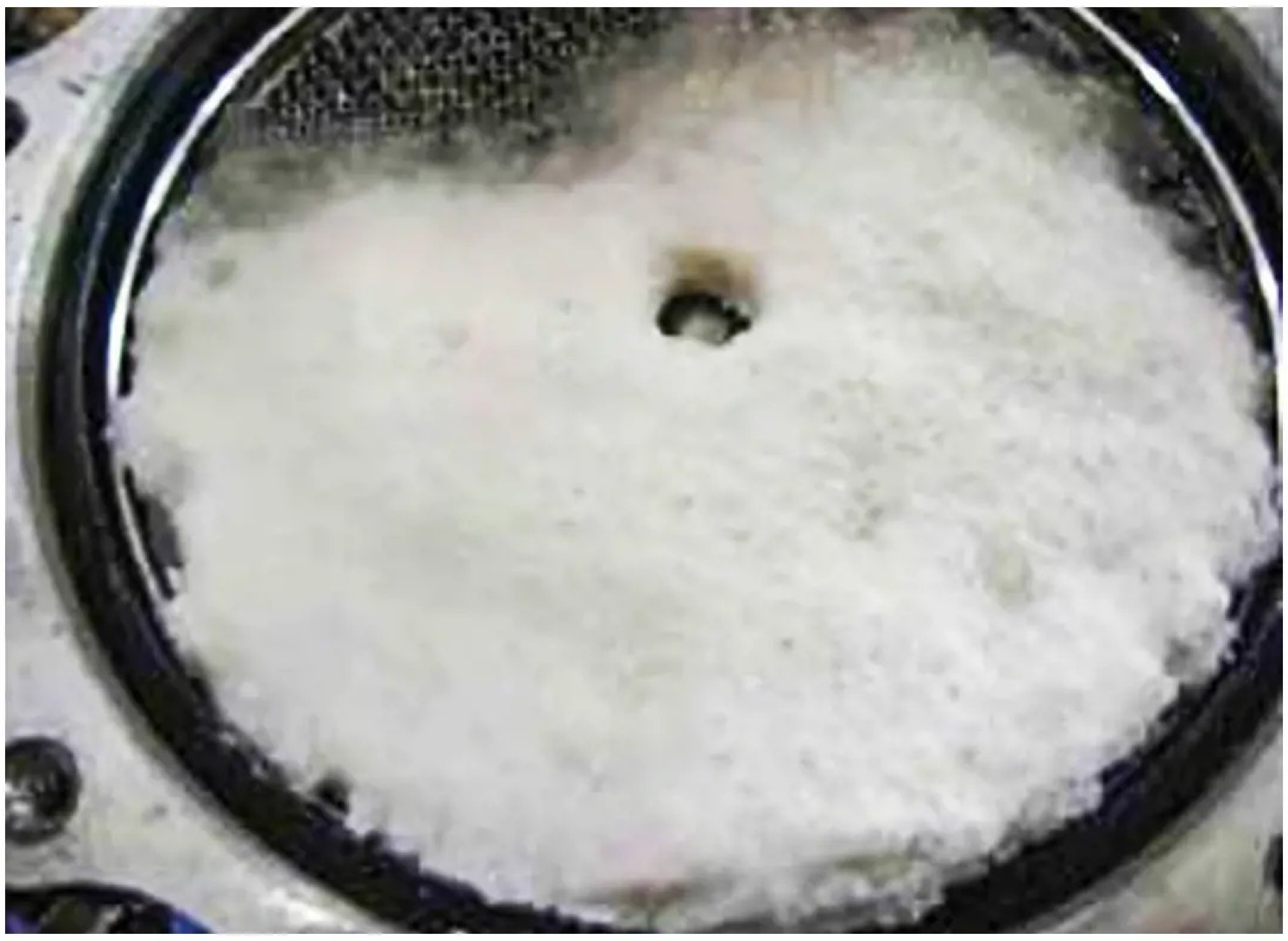
The investigation

Very few scenarios can cause a double engine rollback on a twin-engine jet. The most obvious culprits include fuel » exhaustion or contamination or else a bird strike. Early in the investigation, these were ruled out. With no sign of pre-impact damage, a bird strike was dismissed, while fuel samples recovered from the aircraft showed that there was plenty of it available. On closer analysis, it was established that it was uncontaminated and free of water.

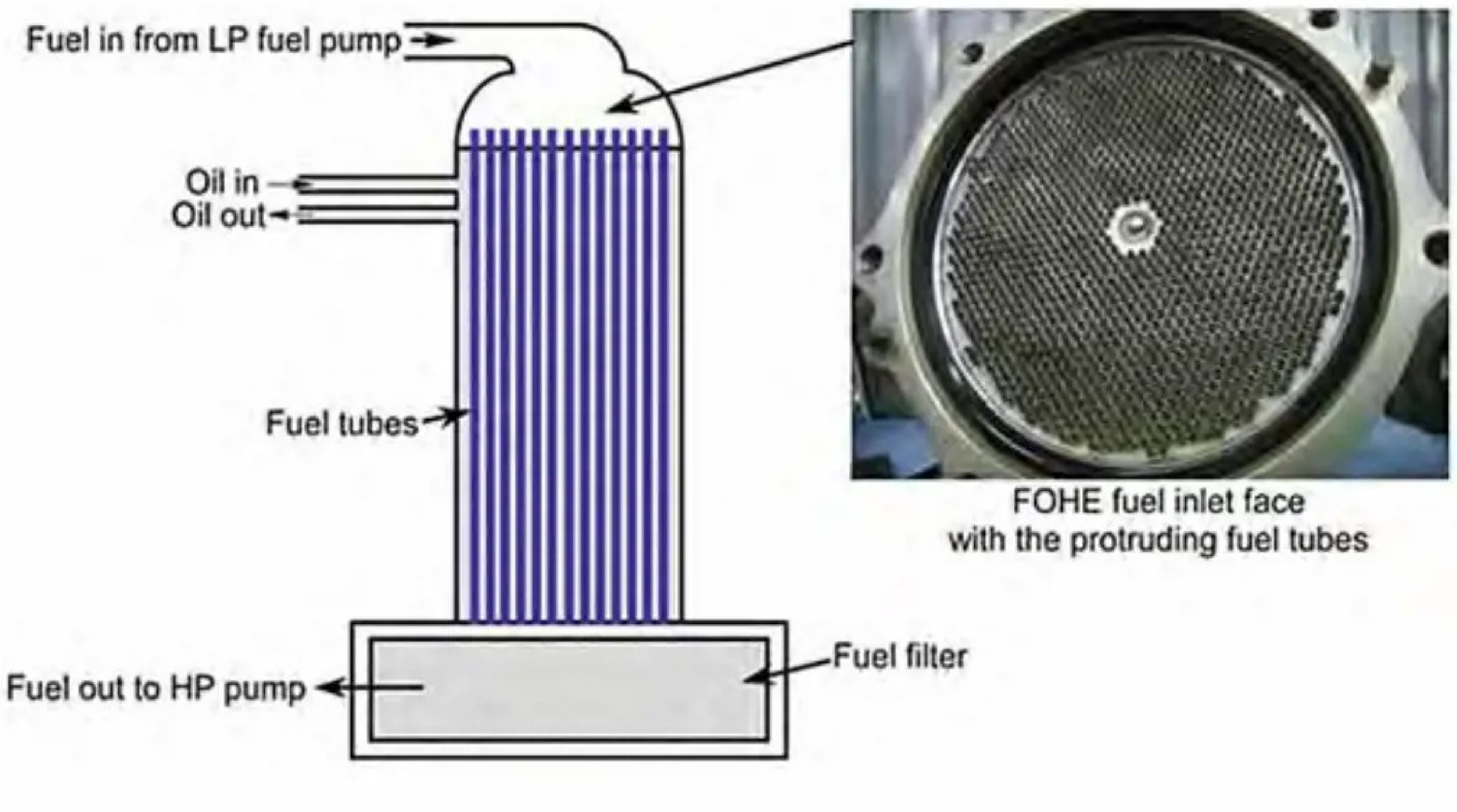
The flight data recorder (FDR) readout showed that the autothrottle had commanded an increase in thrust four times during the final approach, with fuel flow rising from between 4,000-5,000lb/hour to peak on the second of the four commands at 12,228lb/hour and 12,032lb/hour on the left and right engines respectively. After the fourth increase, the actual fuel flow began to stray from the requested rate, dropping and eventually stabilising at about 5,000lb/hour and 6,000lb/hour for the left and right engines respectively. The powerplants continued to produce thrust above flight idle and it was at this point that the crew and autothrottle were commanding full thrust.



LEFT: ***Ice build-up on the walls of a flexible hose during testing*** AAIB



LEFT: ***Ice collecting on the FOHE*** AAIB



LEFT: ***A diagram showing how the FOHE works*** AAIB

Flight data analysed by the AAIB showed that fuel metering valves (FMV) for both engines were fully open in order to supply maximum fuel to the engines, but the flow rate of the fuel hadn't changed. This led investigators to conclude that a blockage or restriction somewhere in the fuel system had caused the reduction of flow rate. But finding the source of the blockage wouldn't be easy.

Investigators searched through the entire fuel system from the three tanks all the way to each engine. No evidence of any obstruction in the pipes or hoses was found. However, five foreign objects were discovered in the fuel tanks – one in the right tank, one in the centre tank and three in the left tank. In the first, a small red plastic scraper used by Boeing's fuel tank closure personnel was discovered. The left tank contained a two inch piece of black plastic tape likely used during the construction of the aircraft, along with a piece of brown paper of the same size and shape. A piece of yellow plastic similar to electrical cable identity tape was also found. A small piece of fabric/paper was found in the centre tank. However, it was ruled that these items had not contributed to the drop in fuel flow.

With no relevant obstruction found, investigators turned their attention to the possibility of a temporary obstacle – something capable of forming and disappearing before recovery. The most likely culprit was ice.

Ice investigation

However, it wasn't that the fuel had frozen. This was ruled out by investigators as the fuel temperature was not recorded to have dropped below the -47°C freezing level for Jet A-1. Instead, after extensive tests on a full-scale mock-ups, the focus turned to the dissolved water content in the fuel – typically around 30-40 parts per million – and the fuel-oil heat exchanger (FOHE).

Using the mock-up of the 777's complex fuel system, investigators were able to simulate the temperature, pressure and fuel flow conditions recorded to have been present during flight 38. Under normal circumstances, the dissolved water content in the fuel remains harmless, but in very cold conditions it can form tiny ice crystals that cling to internal surfaces. When disturbed, those crystals can detach and move downstream as soft clumps.

Tests revealed that ice rarely forms when fuel temperatures are above -5°C, and that below -20°C the

ABOVE: ***On November 26, 2008, Delta Air Lines Flight 18 from Shanghai to Atlanta, another Trent 800-powered 777, suffered an uncommanded rollback of an engine during cruise. The NTSB concluded ice clogging the FOHE was the likely cause***
AIRTEAMIMAGES.COM/WOCO

crystals tend to stay suspended in the fuel and pass harmlessly through the system. However, between those two temperatures, in a zone described by investigators as "the stick range", ice can adhere to surfaces within the pipes, slowly building up over time. During the experiments, engineers found that when the fuel flow rate suddenly increased, the resulting surge swept the ice downstream, where it lodged against the FOHE.

Designed to warm up cold fuel with hot engine oil, the FOHE comprises around 1,000 narrow tubes set within a bath of oil. At the fuel inlet, the tubes stand around 4mm away from the hot end plate. Investigators found that ice crystals were able to accumulate on the ends of the tubes and were unable to melt because they were slightly removed from the heated surface. Crucially, the effect was a partial blockage that restricted, but did not fully cut off, fuel flow. The recorded data for the right engine also showed an increase in oil temperature and pressure, caused by the reduced fuel flow through the heat exchanger. However, limitations in available data for the left engine meant that investigators couldn't eliminate the possibility of a restriction elsewhere in the fuel system, but still concluded that the blockage "most likely" occurred at the FOHE. Further tests confirmed that the environmental conditions experienced by flight 38 would have enabled the required amount of ice build-up to cause a blockage.

Lessons learned

The AAIB made 18 safety recommendations aimed at improving operational procedures, fuel system resilience and aircraft design. Boeing was advised to standardise emergency checklist procedures across all formats to ensure correct operation of fuel control switches during fire and evacuation drills. Interim measures were also recommended to mitigate the risk of ice-induced fuel restrictions in Boeing 777s powered by Rolls-Royce Trent 800 engines. Regulatory authorities were urged to assess the wider implications of these findings across other aircraft engine combinations and to review certification standards to ensure fuel systems could tolerate ice build-up and sudden release.

Further recommendations focused on design modifications and research. Boeing and Rolls-Royce were tasked with redesigning the fuel system to prevent ice blockages at the FOHE, with regulators encouraged to mandate these changes. Additional studies into ice formation and release mechanisms in turbine fuel systems were proposed, alongside suggestions to improve flight data recording and reduce data buffering. Structural enhancements were also recommended, including modifications to landing gear components and cabin fittings to improve crash survivability.

For its part, even before the final AAIB report was published, the US National Transportation Safety Board (NTSB) was pushing for the urgent redesign of the FOHE on Trent 800 engines. This came after a very similar incident on November 26, 2008, involving Delta Air Lines Flight 18 from Shanghai to Atlanta, another Trent 800-powered 777, which suffered an uncommanded rollback of an engine during cruise. The NTSB concluded ice clogging the FOHE was the likely cause.

In March 2009, the Federal Aviation Administration (FAA) issued an airworthiness directive (AD) that incorporated new operational procedures to reduce fuel system icing on 777s powered by the Trent 800.

Rolls-Royce redesigned the FOHE and a 2010 FAA AD mandated the installation of the new unit on all Trent 500, 700, and 800 series engines currently in service.

BELOW: ***British Airways continues to fly 777-200ERs, although it has alternated between the General Electric GE90 and Trent 800 for its engine option over the years***
VINCENZO PACE

That sinking feeling

Stephen Skinner looks back at Air France 296Q, the first fatal crash involving a member of the Airbus A320 Family

When Air France Flight 296Q crashed on June 26, 1988, it marked the first fatal accident involving an Airbus A320. The type had only recently entered service and it had been hailed as a technological leap forward with its sidestick controls, 'fly by wire' systems and computerised flight management. Yet the pilot community regarded these innovations with scepticism and, until the publication of the French accident report in November 1989, this first A320 accident gave credence to their misgivings.

Fighter aircraft had begun using digital flight controls in the 1970s, primarily to compensate for their inherent aerodynamic instability, as well as to eliminate the danger of hydraulic system damage during combat. Airbus incorporated fly-by-wire technology into the design of its airliners with the launch of the A320 in the 1980s as a way to save weight, increase reliability and cut costs. Prior to this all airliners »

Accident in brief

Aircraft: Airbus A320-111
Registration: F-GFKC
Serial number: 009
Name: Ville d'Amsterdam
First flight: January 6, 1988
Flight number: AF296Q
Date of incident: June 26, 1988
Flight origin: Basel/Mulhouse
Flight destination: Basel/Mulhouse
Occupants: 130 passengers, 6 crew
Fatalities: 3

BELOW: *Air France 296Q had departed Basel/Mulhouse with the intention of performing a flypast at the Habsheim Air Show and a circuit around Mont Blanc before returning to Basel/Mulhouse* CHARLES CARATINI/AFP VIA GETTY IMAGES had controls that mechanically linked them to the control surfaces.

On the A320, it was also very different on the flight deck, with a small sidestick instead of a large yoke. Pilot inputs are fed into computers in conjunction with information from the aircraft's speed, angle of attack, etc, adapting the way the control surfaces move depending on the phase of the flight. This provides a large number of safety features, such as stopping the aircraft from stalling and not allowing the pilots to manoeuvre dangerously.

Boeing followed suit with fly-by-wire a decade later with the 777, but its 737s still use traditional controls. When the A320 entered service in 1988 the 737 dominated the single-aisle short-haul market. This is now no longer the case and in 2025 the A320 Family has overtaken the 737 as most-delivered commercial airliner in history.

The flight

On June 23, 1988, Air France accepted delivery of Airbus A320-111, F-GFKC (c/n 009) *Ville d'Amsterdam*, its third A320. Three days later, the newly delivered machine was making public relations flights. Air France was eager to promote its new European-built airliner and had agreed to take part in a flying display during the type's first passenger flight.

F-GFKC flew from Paris/Charles de Gaulle to EuroAirport Basel Mulhouse Freiburg, which is situated in France but adjacent to the Swiss and German frontiers. It had four cabin crew and two pilots, both of whom were senior training captains. The captain was Michel Asseline who had been very involved in the introduction of the A320 to the Air France fleet. His co-pilot, Pierre Mazières, was also a training captain, yet because of the newness of the aircraft neither of them had flown many hours on it. At Basel/Mulhouse there was a brief press reception and then 130 passengers boarded for a short sightseeing charter flight. F-GFKC was to take-off, make two fly-pasts at the nearby Mulhouse/Habsheim airfield, then fly south around Mont Blanc before returning to Basel/Mulhouse.

A big crowd had gathered at Mulhouse/Habsheim, where the flying club had organised an air display and requested an appearance by the new Airbus. Their airshow was not a major event, wholly unlike the large-scale Paris or Farnborough Airshows. Habsheim was a general aviation airfield with a solitary asphalt runway, 02/20, which was 3,281ft long, clearly too short for an A320 and unable to even support the weight of the aircraft. Running southeast/northwest there was a shorter grass runway, 16/34, also used by the light aircraft operating from the airfield.

The flight was very different to Air France's usual scheduled services, so its planning team studied Habsheim and assumed the display line would be along

LEFT: ***Marceau Long, president of Air France, and Jean Pierson, managing director of Airbus, signing the contract on April 22, 1985, for the purchase of 25 A320s with 25 options*** AFP VIA GETTY IMAGES

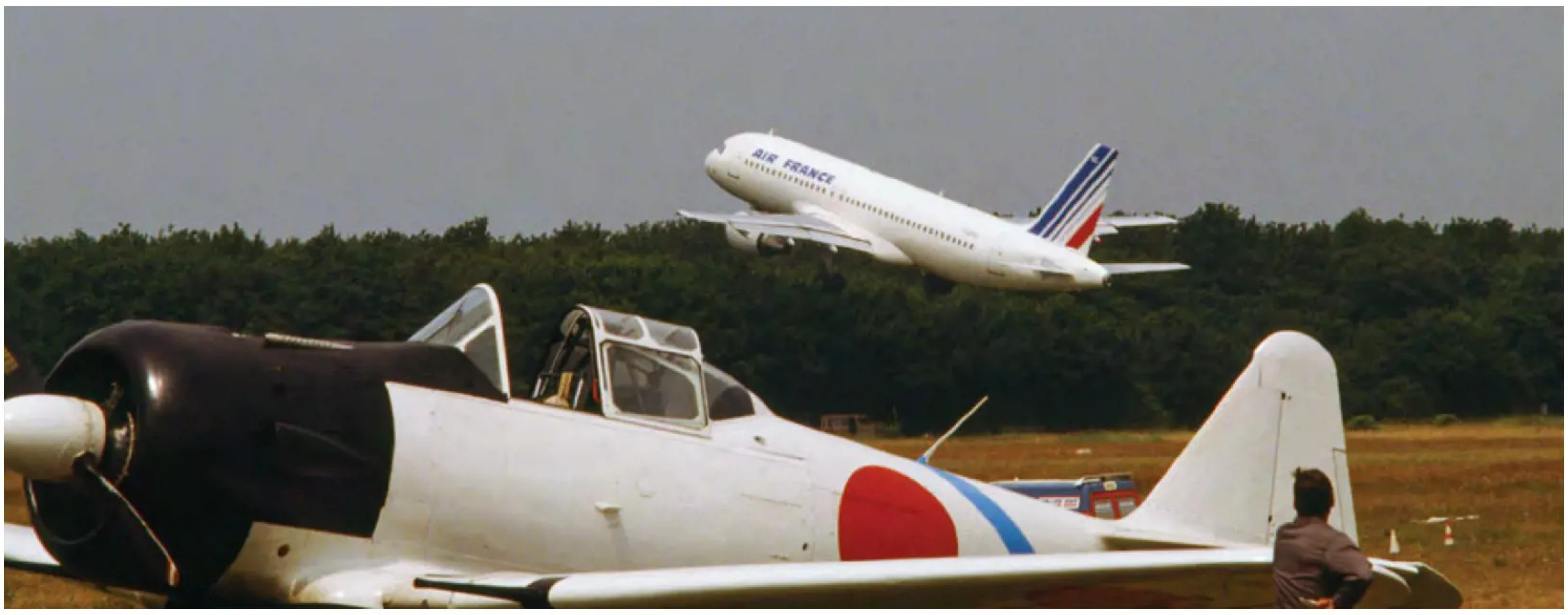
LEFT: ***French Prime Minister Jacques Chirac and Air France CEO Jacques Friedman speaking to journalists on board an A320 demonstration flight over Paris in March 1988*** JACQUES LANGEVIN/SYGMA/SYGMA VIA GETTY IMAGES

A320
F-WWDC
AIR FRANCE A320
BELOW: ***Air France placed its A320 order in April 1985 and, at the time of the accident, three had been delivered*** AIRTEAMIMAGES.COM/ WOLFGANG MENDORF

> “Air France was eager to promote its new European-built airliner and had agreed to take part in a flying display during the type’s first passenger flight”

EuroAirport
BASEL MULHOUSE FREIBURG

ABOVE: ***The aircraft had travelled from Paris/Charles de Gaulle to Basel/Mulhouse, from where the doomed flight would depart*** EUROAIRPORT BASEL MULHOUSE FREIBURG



RIGHT: ***The stricken aircraft at an altitude of 30ft and about to enter the forest*** PATRICK ROBERT/SYGMA/CORBIS/SYGMA VIA GETTY IMAGES

AIRBUS INDUSTRIE
A R M →

the asphalt runway, which had adequate obstacle clearances. The flight crew were instructed not to descend below 100ft, but there was also a lack of any specific information or rulings about how the Airbus should be displayed, and it appears preparations were made in haste. Critically no reconnaissance of the airfield was made in advance.

As the flight crew were senior and experienced, it was probably felt unnecessary to prescribe how they should manage the display. They were not given any advance notice of the display and were only informed of it when they logged in at Charles de Gaulle that morning to take the flight. There they received some paperwork but no verbal briefing. The notes instructed them to make a low speed, low pass along the tarmac runway at Habsheim, followed by a fast pass at 100ft. Afterwards, F-GFKC would climb to cruising altitude, make a sightseeing flight around Mont Blanc, then return to Basel/Mulhouse where the passengers would disembark.

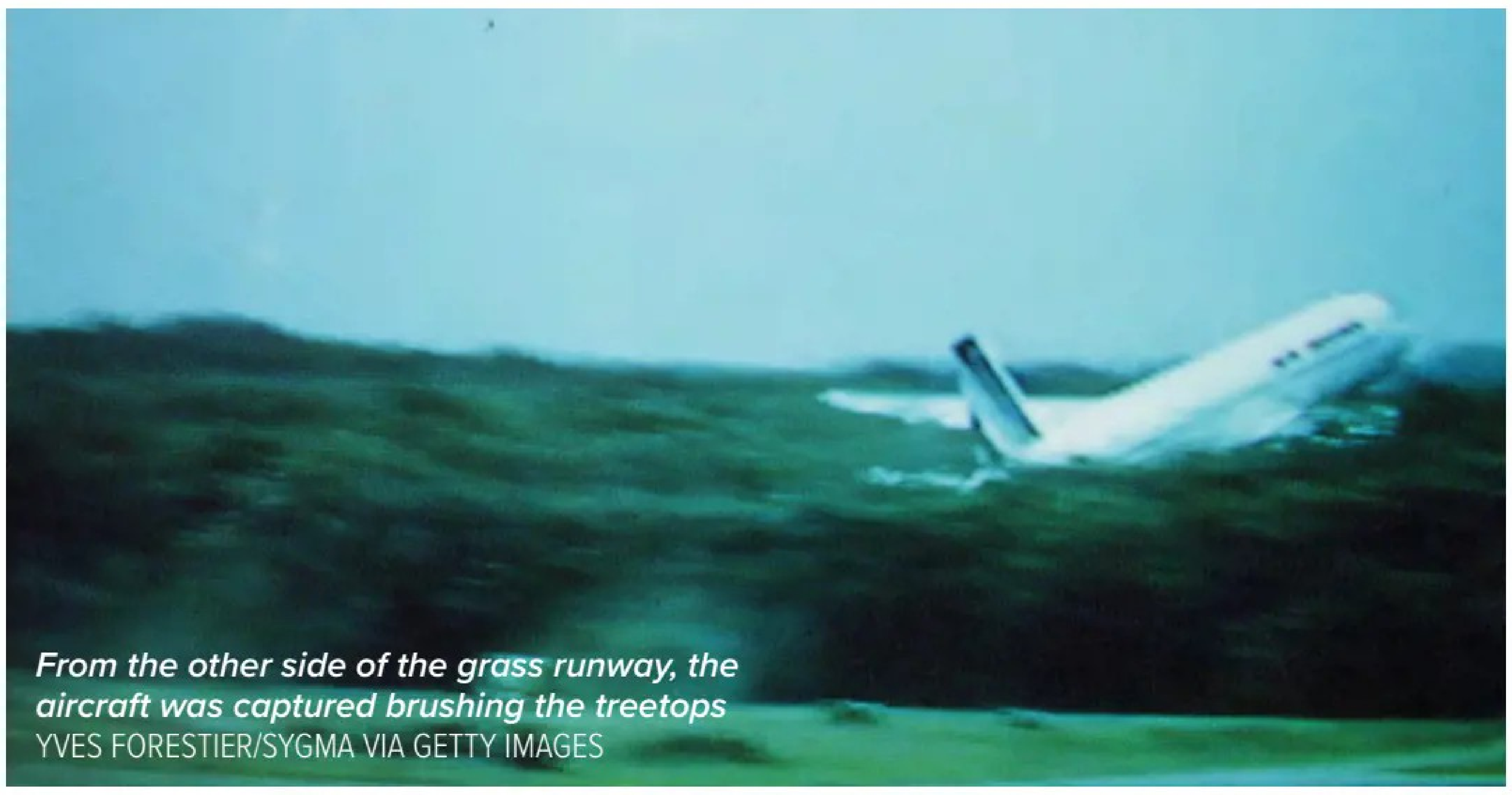
After arriving at Basel/Mulhouse the crew gave a short press briefing then prepared for the passenger flight. As F-GFKC taxied out, the pilots agreed Captain Pierre Mazières would fly the aircraft for the slow pass and Captain Asseline for the fast pass. The organisers of the Habsheim display had briefed all of the participants except the Air France crew, and were not troubled that the A320 pilots were unable to take part in the briefing.

As Habsheim was only four minutes flying time from Basel/Mulhouse, the A320 would only climb to 2,000ft with FLAPS 1 set and would locate the airfield visually as neither of the pilots were familiar with it or knew its precise location. They agreed to transition to FLAPS 3, extend the landing gear, then make a slow pass at 100ft at a maximum angle of attack, but to do so they would disconnect the Alpha Floor protection – a system that protects the aircraft from stalling if the angle of attack exceeds 15°. It automatically adds TOGA (take-off/go-around) thrust to get out of the stall, and if the pilot keeps holding the sidestick back, the Alpha Floor will intervene to stop the aircraft pitching up even further, however much the pilot pulls it back.

The crew decided the Alpha Floor had to be disconnected because otherwise, when the aircraft reached a 15° angle of attack, it would intervene and apply full thrust. Mazières wanted to demonstrate the aircraft’s attributes by flying slowly with a high angle of attack with Asseline gradually applying more power because it would look very impressive. Then they would apply full power and climb out for the fast run.

The crash

Having departed Basel/Mulhouse at 1441hrs, the pilots identified Habsheim at just five miles distant and the co-pilot reduced thrust to flight idle as the aircraft »



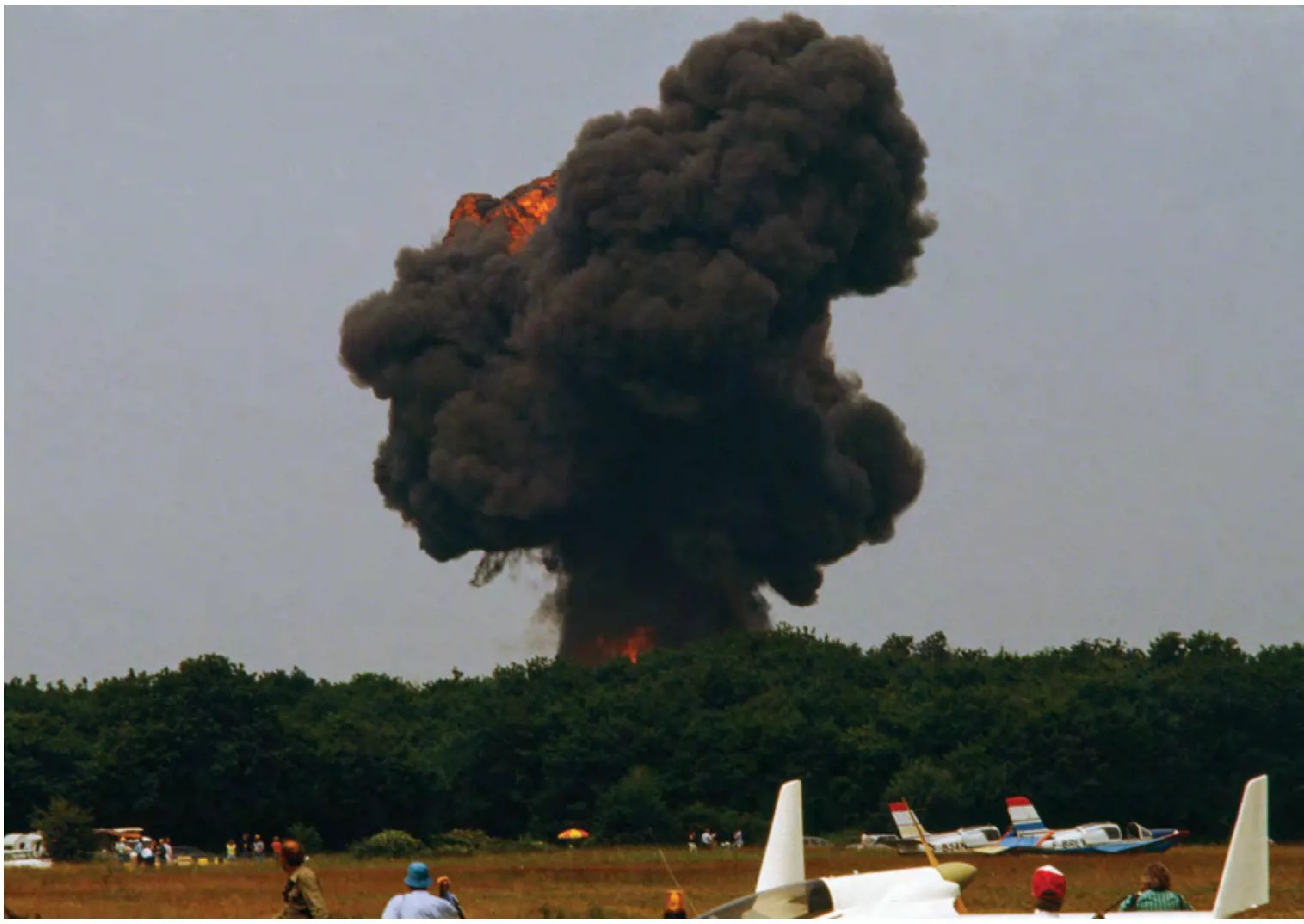
From the other side of the grass runway, the aircraft was captured brushing the treetops YVES FORESTIER/SYGMA VIA GETTY IMAGES descended at a rate of 600ft per minute. Mazières then realised the spectators' display line was aligned with the grass runway pointing northwest, not with the tarmac runway facing northeast, so he banked the aircraft to align with the grass runway. He probably did not see the densely wooded trees immediately beyond the end of the grass runway. The tarmac runaway was quite different, with a substantial area beyond it free of trees.

Asseline as co-pilot reported: "OK, you're at 100 feet. Watch, watch!", indicating the airliner was at the target altitude and it should be maintained. At this point, F-GFKC was in a banked turn to align with the grass runway.

The crew deactivated the Alpha Floor, preventing the computerised control systems from intervening and applying power as the angle of attack increased, but only seconds later the altitude decreased to 40ft and the co-pilot warned about pylons ahead, but not the trees or the height. The speed continued to decay to less than 132kts and the altitude below 30ft.

Asseline had been briefed to gradually add thrust as the aircraft progressed past the crowd, but he had not done so. F-GFKC was down to 122kts as it swept past the Habsheim crowds at a high angle of attack – 122kts being below the normal A320 approach speed.

Mazières suddenly jerked the thrust levers fully forward and pulled the sidestick fully back as he had seen that the trees ahead were as high or higher than their aircraft. They were more than 40ft high. The engines began to spool up from flight idle and, after five seconds, they were at 83% thrust, but by now the A320 was into the trees.



ABOVE: *Airshow spectators looked on in horror as the airliner was dragged down and disappeared from view, followed moments later by a thick, black cloud rising from the trees* PATRICK ROBERT/SYGMA/CORBIS/SYGMA VIA GETTY IMAGES

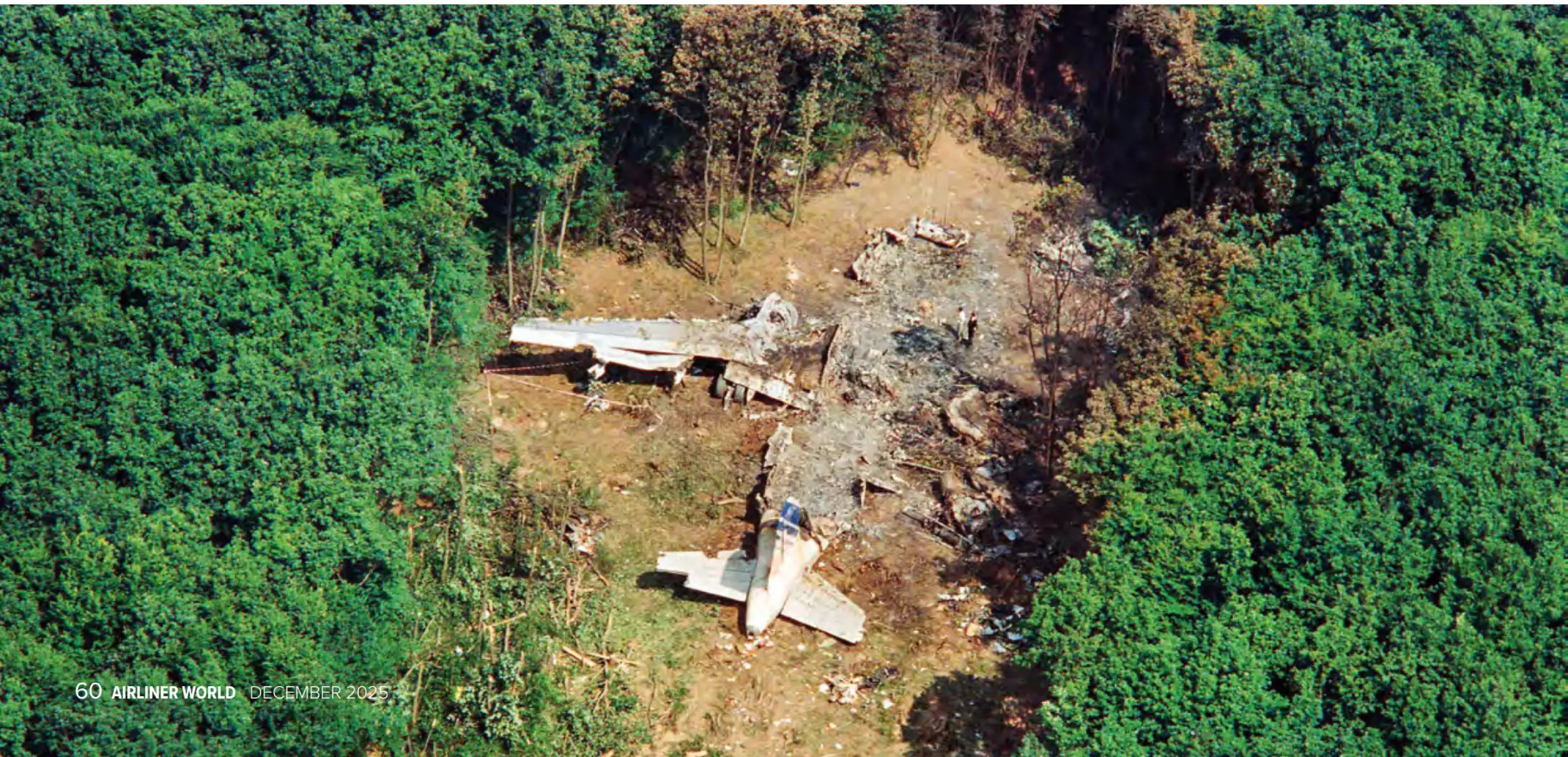
Horrified spectators watched as the new jet's underside impacted with the trees and the engines began to ingest branches as the airliner was dragged down and disappeared from view. A moment later a thick, black mushroom cloud rose from the trees, leaving spectators on the ground shocked by what they had witnessed and fearing the worst.

After impacting the densely wooded area, the starboard wing was torn off and its fuel immediately ignited. Habsheim's fire and rescue crews set off to help, but were held back by the density of the trees. Fortuitously, although some of the passengers aboard the aircraft were dazed at this point, all were alive.

Fallen branches initially obstructed the opening of the L1 door and the inflation of the emergency slide, but this was rectified. Branches caused continual problems and passengers struggled to evacuate the crash site because of the volume of tree debris, falling on top of each other, but most got out. By now the fire had penetrated the cabin, which

> **"Horrified spectators watched as the new jet's underside impacted with the trees and the engines began to ingest branches as the airliner disappeared from view"**

BELOW: *The day after the accident, little remained of the aircraft or the surrounding area* CHARLES CARATINI/AFP VIA GETTY IMAGES



RIGHT: *At the time of the crash, the aircraft had made 18 flights, totalling 22 hours* CHARLES CARATINI/AFP VIA GETTY IMAGES

was filling with acrid black smoke. The remaining passengers in the front half of the cabin moved to the front door, some suffering from burns, meanwhile evacuation from the rear door proceeded smoothly. Tragically, during the evacuation, two children remained trapped: a disabled boy who couldn't get out of his seat and a girl who was unable to unfasten her seatbelt. A woman who had reached the L1 exit bravely went back to help them, but was overcome by smoke and all three died. Of the 136 people on board, 133 survived.

The causes

The cockpit voice recorder (CVR) and flight data recorder (FDR) were both found intact and transported to Paris for analysis. In addition, there was film of the accident, which became very well-known and also helped the French investigators.

It was clear the accident had been caused by the aircraft being flown at an exceedingly low altitude, at a dangerously low speed, with the TOGA thrust applied too late. Preparation for the flight had been very poor, the pilots were totally unfamiliar with area and the airline had not carried out a reconnaissance of the airfield. No one had given any briefing, although the Habsheim organisers had briefed others taking part in the event.

The pilots' attitude to the Habsheim show indicated a lack of professionalism. With only five miles to run to the airfield after identifying it, this resulted in a rushed approach that did not allow them to properly stabilise the descent, establish a fixed height or maintain a constant speed.

Matters were exacerbated when Mazières realised he would not be using the tarmac runway, 02/20, to conduct the flyover, which required a last-minute line up manoeuvre with the grass runway. In their defence, the flight crew claimed the engines did not react quickly enough, but it was proved that this was not the case. The pilots' flypast height was lower than surrounding obstacles, the engines being at flight idle, the slow speed and the late application of power, were all key contributory factors.

The French authorities recommended that, in the future, display flights should only be made without passengers and with minimum crew. The flight crew should meet the staff and prepare all details of the flight well in advance of the event, survey the site and rehearse the flight in a simulator. For all passenger flights there was to be thorough pre-flight briefing on the use of seatbelts.

In the resulting criminal trial, Asseline, Mazières, two Air France officials and the president of Habsheim Flying Club were all prosecuted for involuntary manslaughter. All received a guilty verdict at the conclusion of the trial in 1997, though only Asseline served a prison sentence – ten months followed by ten months' probation.

The film of the whole accident was broadcast worldwide and consequently some in the aviation community expressed the view that the fly-by-wire system had malfunctioned and caused the accident. But the 17-month-long French investigation effectively quashed such accusations and there are now many airliners around the world that rely on fly-by-wire control systems. AW

RIGHT: *Captain Michel Asseline in 1994, three years before he was sentenced to ten months in prison* YVES FORESTIER/SYGMA VIA GETTY IMAGES

THE NIGHT THE LIGHTS went out in Lockerbie

On a cold December evening in 1988, 259 people on board Pan Am Flight 103, along with 11 people in the small Scottish town of Lockerbie, were murdered in one of the UK's worst air disasters. **Lee Cross** tells the story of that fateful night and the investigation that is still ongoing almost 40 years later

It is likely that none of the passengers boarding Pan Am Flight 103 on the evening of December 21, 1988, were aware of the threat against them. Just over two weeks earlier, an anonymous telephone message had been left at the US Embassy in Helsinki, Finland, threatening a Pan Am aircraft flying between Frankfurt and the US within the next 14 days.

Despite being dismissed as a hoax by some authorities, the threat was passed on to the FAA, which subsequently pre-warned various US embassies, presumably to give government employees the chance to make alternative arrangements. Sadly, the general public was not afforded the same warning, as it was deemed that doing so would only offer the perpetrators publicity and credibility. It was also believed that it could cause harm to the aviation industry, especially Pan Am, whose financial situation was already precarious.

Flight 103 originated in Frankfurt. The initial leg, from the German city to London/Heathrow, was flown by one of the airline's Boeing 727s. In London, 49 passengers from the Frankfurt leg were transferred over to the larger Boeing 747-121, N739PA (c/n 19646) *Clipper Maid of the Seas*, and joined by 194 others, bringing the total number of passengers aboard the jumbo to 243. Passenger luggage, which had already been screened at Frankfurt, was loaded onto N739PA without any further checks.

The flight crew that evening, all based at New York/JFK, consisted of 55-year-old Captain James Bruce MacQuarrie, an experienced pilot with almost 11,000 flight hours, of which more than 4,000 had been accrued in 747s. He was assisted by First Officer Raymond Wagner, 52, who had around 5,500 flight hours on the 747, and Flight Engineer Jerry Don Avritt, 46, who had over 8,000 hours of flying experience.

Accident in brief

Aircraft: Boeing 747-121
Registration: N739PA
Serial number: 19646
Name: *Clipper Maid of the Seas*
First flight: January 25, 1970
Flight number: PA103
Date of incident: December 21, 1988
Flight origin: Frankfurt
Flight destination: Detroit/Metropolitan
Via: London/Heathrow and New York/JFK
Occupants: 243 passengers, 16 crew
Fatalities: 259, plus 11 on the ground

PAN AM
N739PA
BOEING 747

BELOW: ***Boeing 747-121, N739PA (c/n 19646), was the 15th 747 built. Delivered to Pan Am on February 15, 1970, it was originally christened*** **Clipper Morning Light*****, before being named*** **Clipper Maid of the Seas** ***in 1979***
AIRTEAMIMAGES.COM/CARL FORD

The initial leg of Flight 103 – between Frankfurt and Heathrow – was operated by one of Pan Am's Boeing 727s. In London, 49 passengers were transferred over to the larger Boeing 747 and joined by 194 others AIRTEAMIMAGES.COM/WOLFGANG MENDORF

In the cabin, the passengers were attended by 13 cabin crew members. Led by Senior Purser Geraldine Murphy, 51, they were a diverse bunch that included seven Americans, two Frenchwomen and others from England, Germany, Spain, Sweden, Finland, the Dominican Republic and the Philippines.

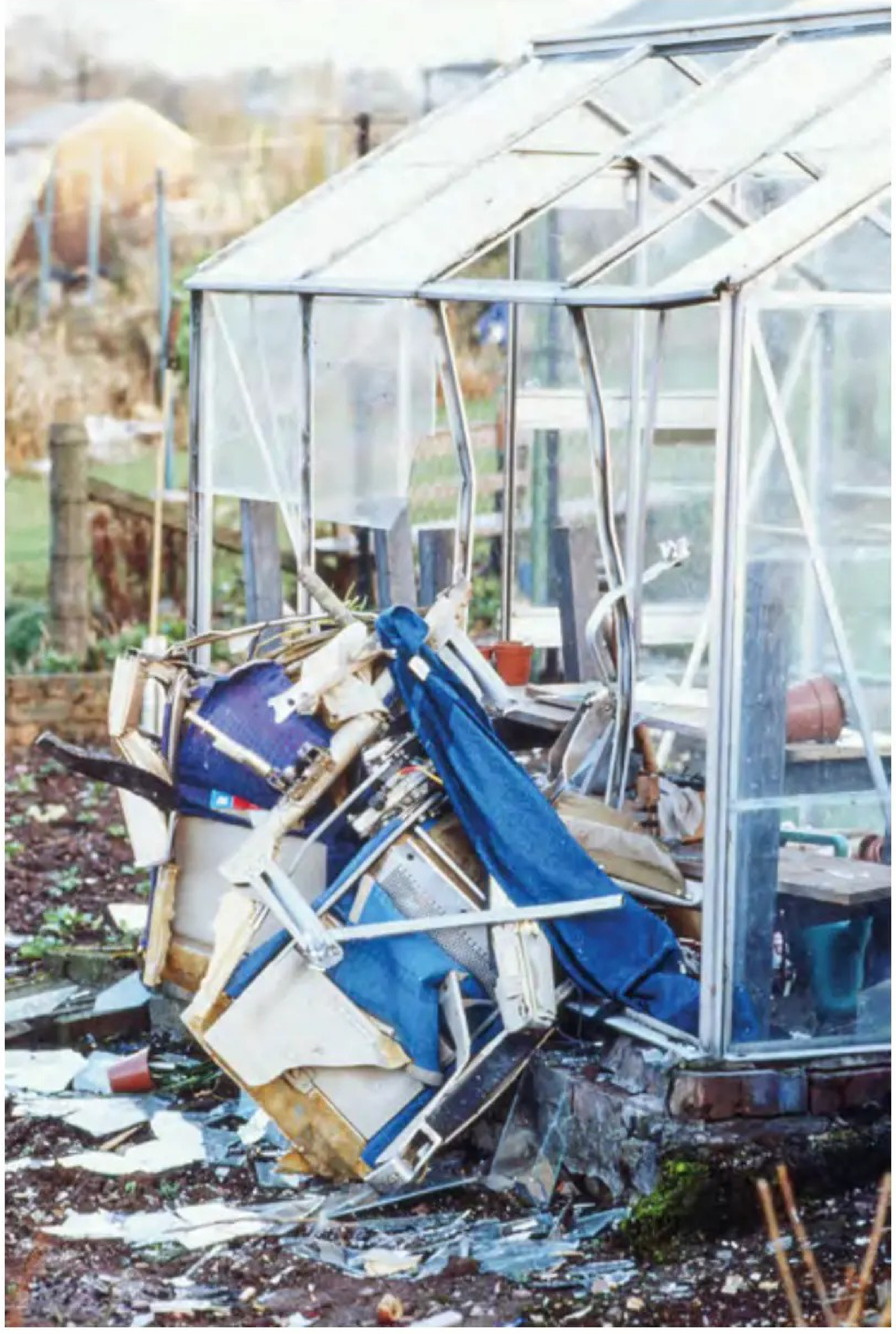
The crash

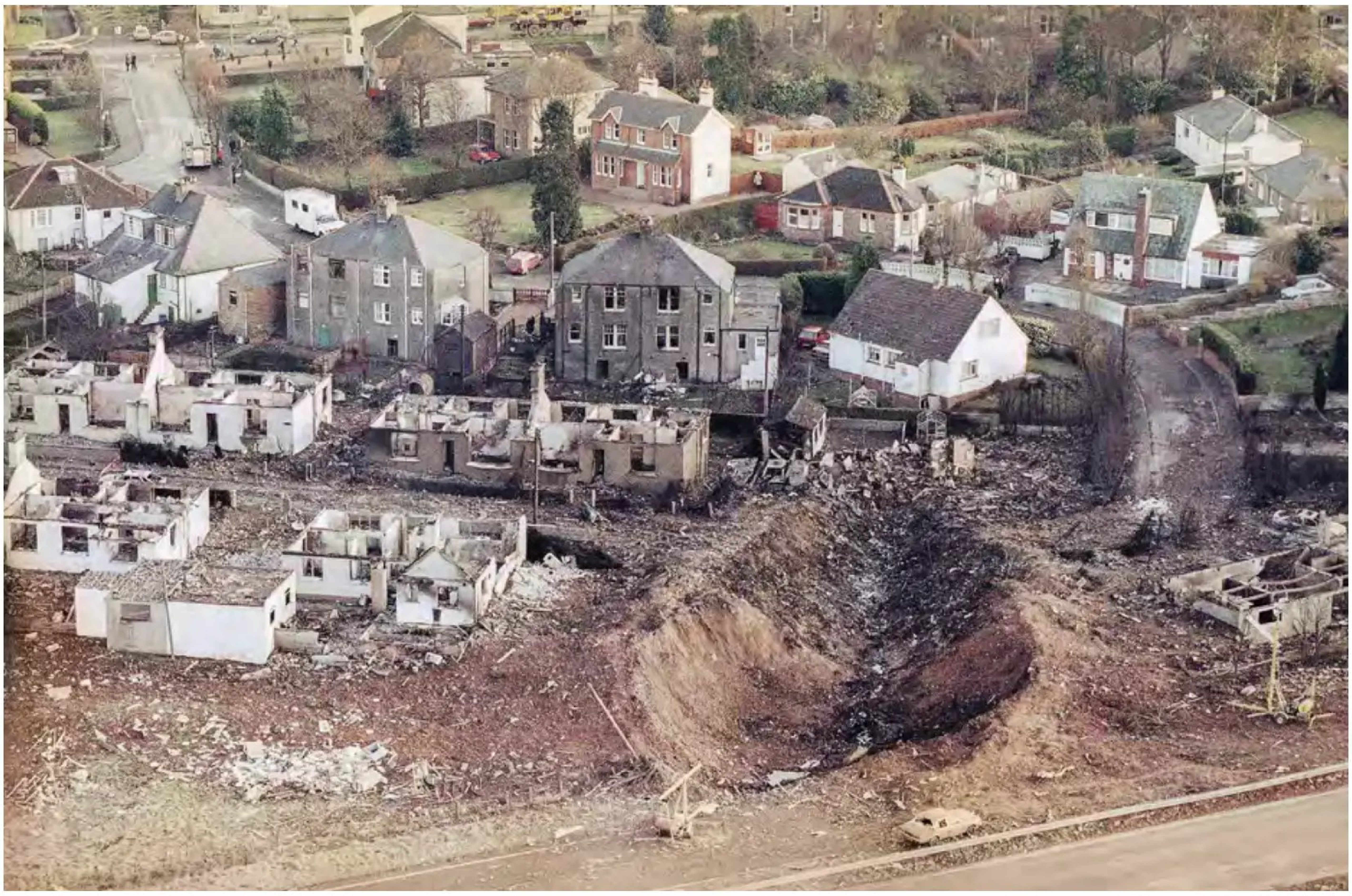
At 1825hrs local time, *Clipper Maid of the Seas* took off from Heathrow's runway 27R bound for New York/JFK. According to the subsequent report, as the aircraft approached the Burnham VOR, it took up a radar heading of 350° and flew below the Bovingdon holding point at 6,000ft. It was then cleared to climb, initially to flight level 120 (12,000ft) and subsequently to flight level 310 (31,000ft), which it reached just northwest of Pole Hill VOR at 1856hrs.

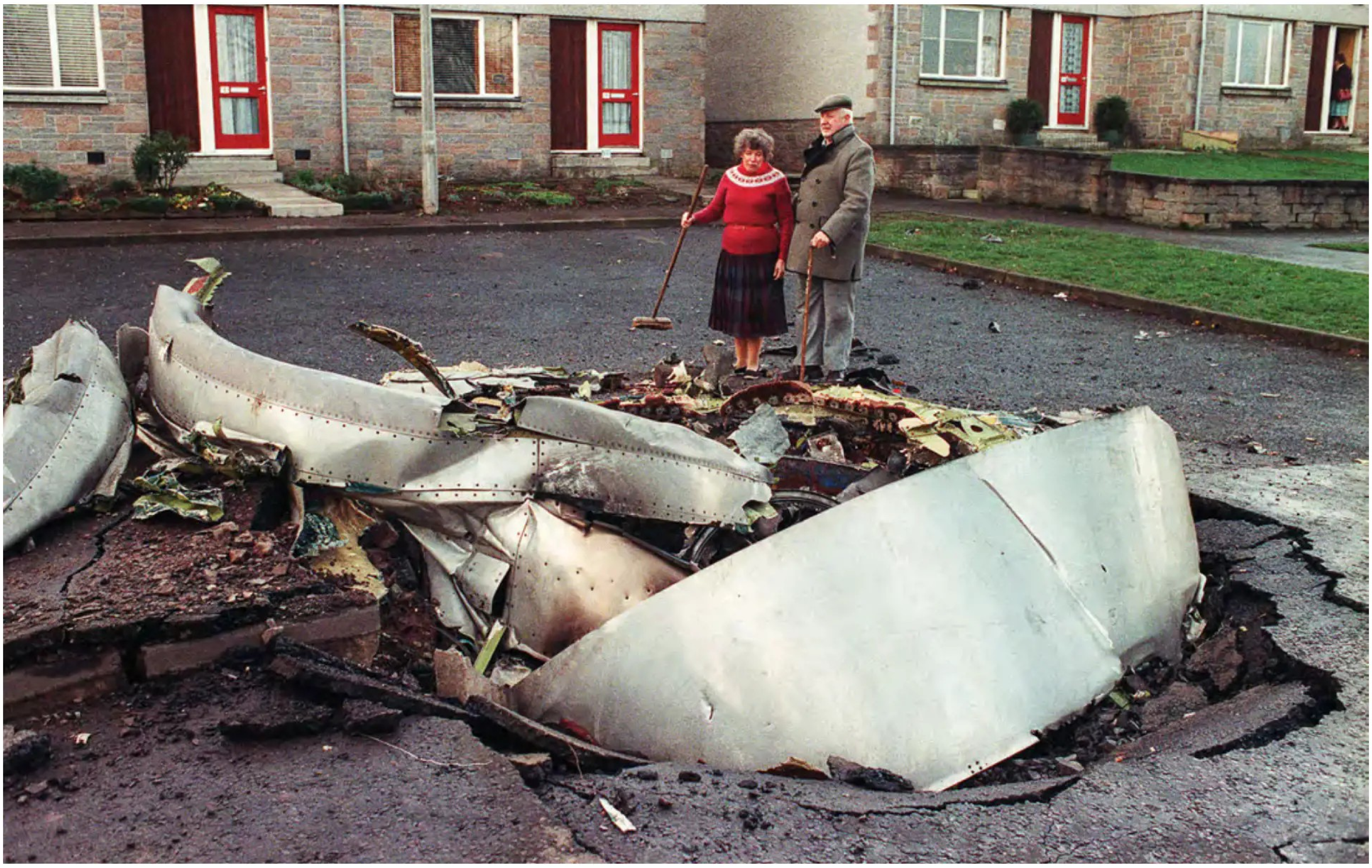
Just under 40 minutes after departure, the 747 was cruising at an approximate heading of 320°. The weather conditions that night were good, with broken cloud at lower levels and good visibility. At around 1903hrs, Alan Topp, the airways controller at Scottish Air Traffic Control Centre, transmitted the 747's oceanic clearance on behalf of Shanwick Oceanic Control. But the transmission was not acknowledged. Then, the secondary radar return from the flight disappeared from radar screens. Multiple primary radar returns were then seen fanning out downwind as the jumbo jet disintegrated in mid-air, scattering wreckage over a vast area of the border regions of Scotland.

Residents in the small Scottish town of Lockerbie later reported that, just after 1900hrs, there was a rumbling noise that sounded like thunder. The noise rapidly increased to deafening proportions "like the roar of a jet engine under power." Looking skyward, the noise appeared to be coming from a "meteor-like object" that was trailing flame.

Residents then described a larger, dark, delta-shaped object "resembling an aircraft wing", which was not on fire, landing around the same time in the Sherwood Crescent area. This was the wing section and centre fuel tank, still loaded with fuel,


ABOVE: ***Some of the wreckage lying next to a greenhouse. Debris from the explosion was scattered over 845 square miles, the largest crime scene in history*** GEORGES DE KEERLE/GETTY IMAGES

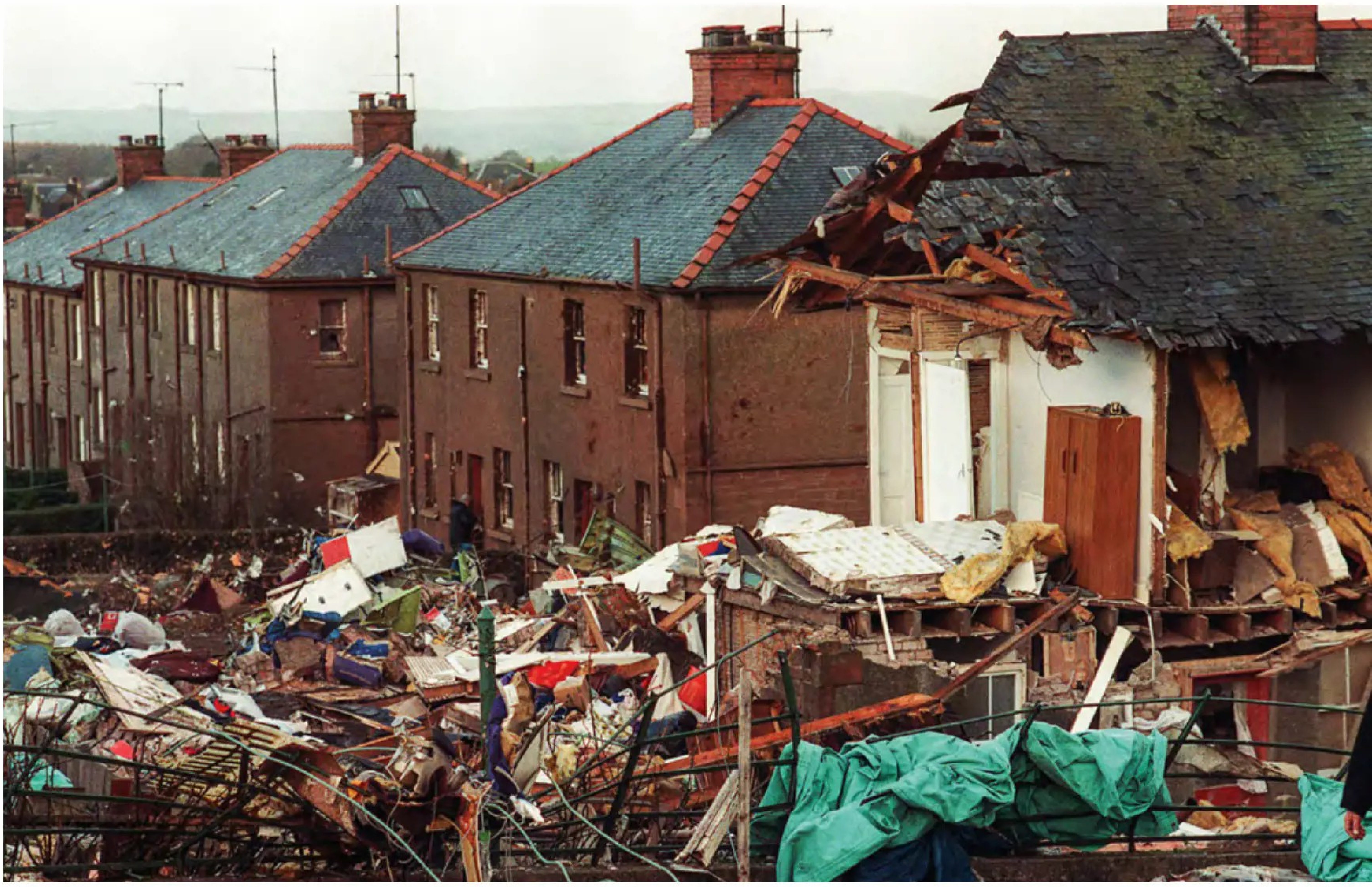

LEFT: ***The wing section and centre fuel tank smashed into Sherwood Crescent, Lockerbie, ploughing a crater some 50m long and around 10m deep. The ensuing fireball then set fire to neighbouring houses and carried debris aloft*** ALAMY/ASSOCIATED PRESS



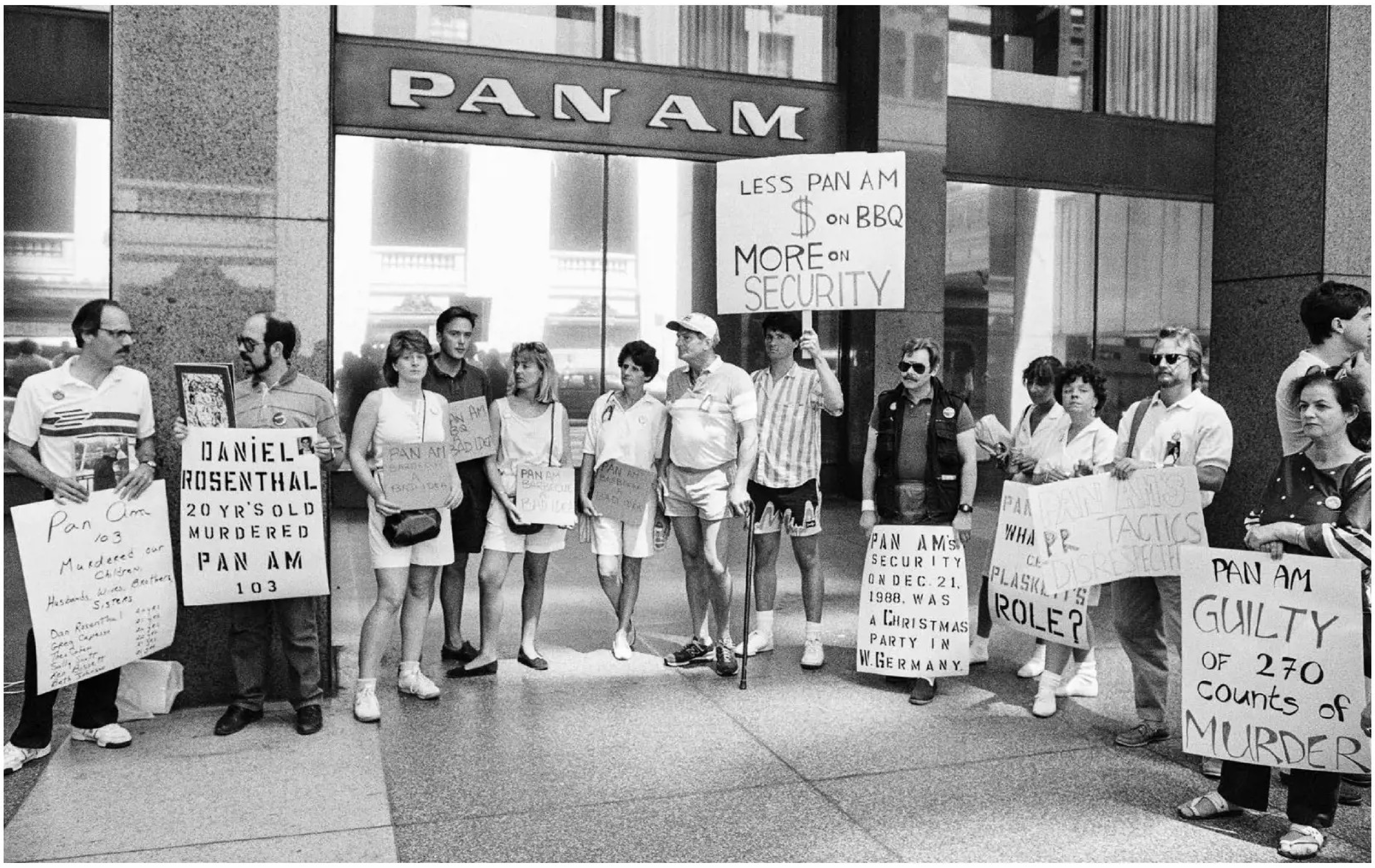
ABOVE: ***Residents of Lockerbie stand by one of the four engines of the ill-fated jet. Engine No. 3 embedded itself in a road to the northeast of the town. The three remaining engines landed in the Netherplace area of town*** ROY LETKEY/AFP VIA GETTY IMAGES

which plummeted to the ground. Upon impact, they burst into flames, gouging a crater some 50m long and around 10m deep. The ensuing fireball set alight to nearby houses and carried debris aloft, which was blown downwind and carried for several miles.

Another significant portion of the fuselage landed on a housing estate in the Rosebank Crescent district of Lockerbie. Engine No. 3 embedded itself in a road to the northeast of the town. The three remaining engines landed in the Netherplace area of Lockerbie. Meanwhile, the forward section of the 747, including the flight deck, was found in the rolling countryside, some 2.5 miles (4km) east of the town. The rest of the debris was scattered in two main paths stretching east past the town of Langholm and all the way to the east coast of England, covering a distance of some 130km. »



RIGHT: ***Another significant portion of the fuselage landed on a housing estate in the Rosebank Crescent district of Lockerbie. Meanwhile, the forward section of the 747, including the flight deck, was found in the countryside, some 4km east of the town*** ROY LETKEY/AFP VIA GETTY IMAGES


PAN AM
LESS PAN AM $ ON BBQ MORE ON SECURITY
DANIEL ROSENTHAL 20 YR'S OLD MURDERED PAN AM 103
Pan Am 103 Murdered our Children Husbands Wives Brothers Sisters
PAN AM's SECURITY ON DEC. 21, 1988, WAS A CHRISTMAS PARTY IN W.GERMANY
ROLE?
PAN AM GUILTY OF 270 Counts of MURDER

LEFT: *Families of the victims protest outside the head offices of Pan Am in New York. The airline limped on for another three years before collapsing on December 4, 1991*
BETTMANN/GETTY IMAGES

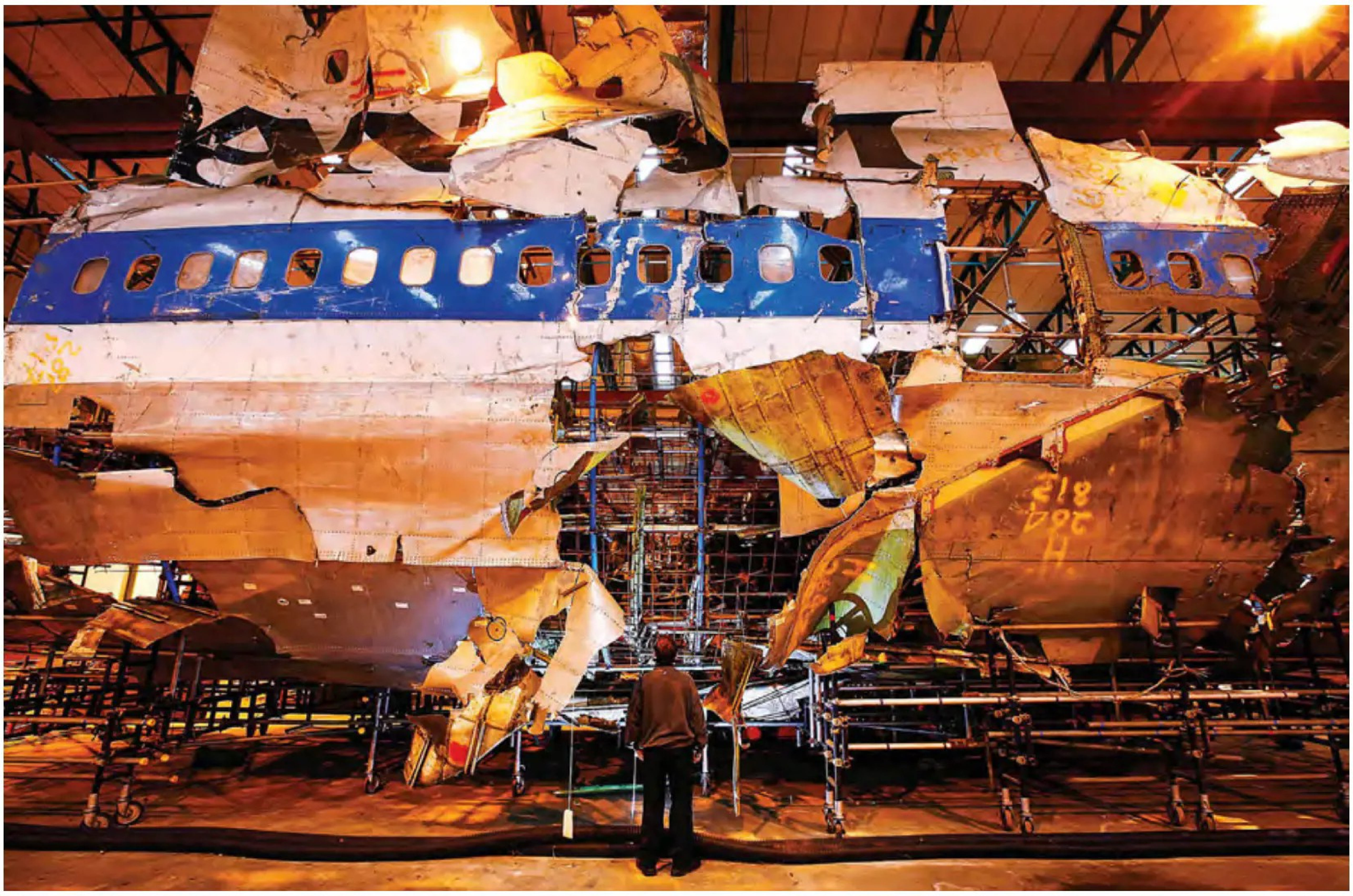
In total, the wreckage was scattered over 845 square miles, the largest crime scene in history.

All 259 souls onboard, along with 11 people on the ground, were killed. Five others were seriously injured and more than 20 houses in the area were destroyed or damaged beyond repair.

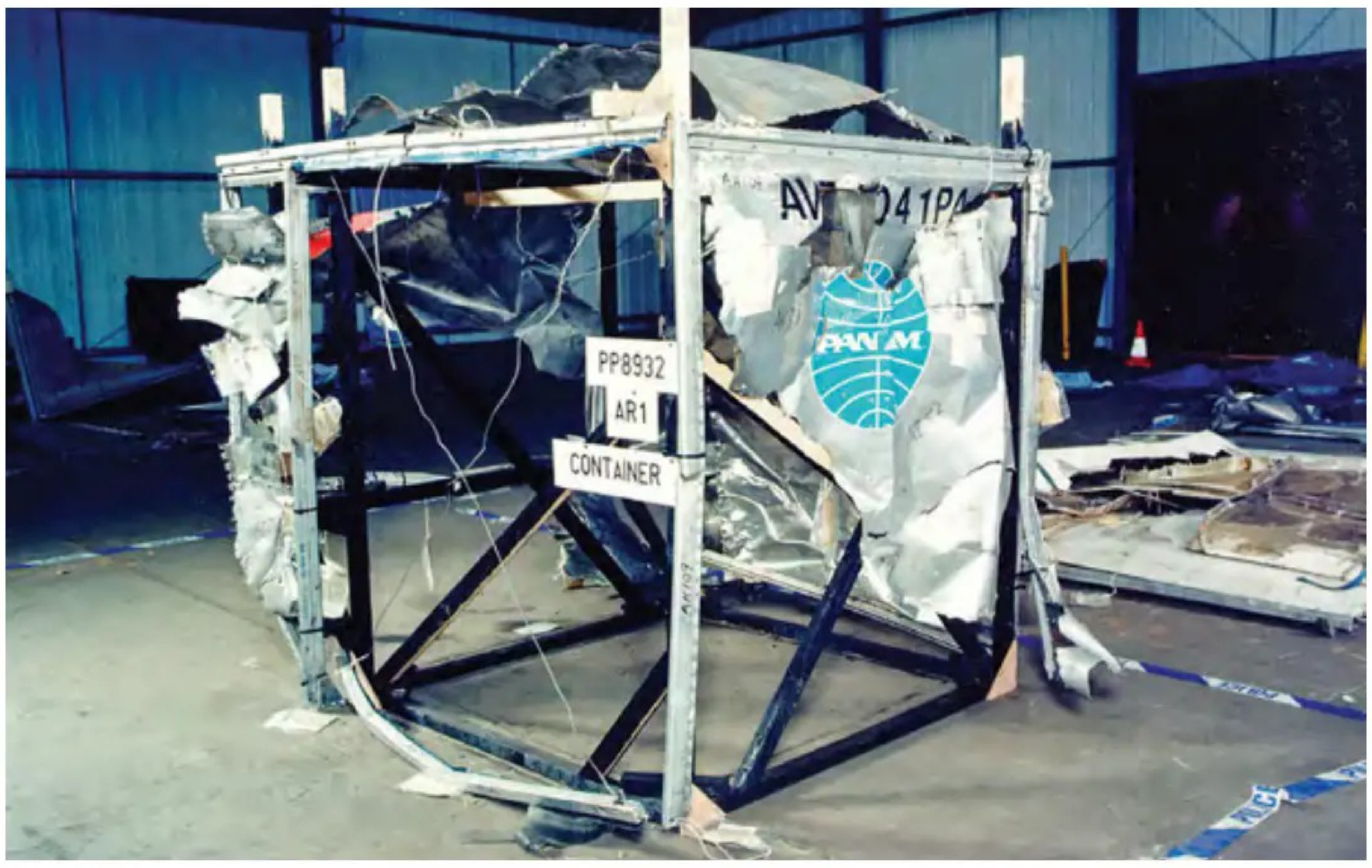
Aftermath

A week after the disaster, the British Air Accidents Investigation Branch (AAIB) confirmed what many had already suspected, that a bomb had brought down PA103. The initial investigation had found evidence of a 'detonating high explosive', believed to have been Semtex. This came from examining recovered parts of the baggage containers where the damage was consistent with such a blast.

The bomb had apparently been hidden in a Toshiba radio-cassette player that was being carried in a Samsonite suitcase. Investigators revealed that the device was located in the baggage container AVE4041, positioned on the left-hand side of the forward cargo hold. The explosion produced a high-intensity shockwave that ruptured the side and base of the container. As the wave spread outwards, it shattered and deformed the inner surface of the fuselage skin. A secondary wave, caused partially by the reflections off the baggage behind the area affected by the immediate blast, but also from the chemical changes of the explosive itself after detonation, caused the skin to stretch and



LEFT: *The reconstructed remains of N739PA were stored in a warehouse in Farnborough for many years. However, the wreckage has since been moved to the US to form part of the evidence in the case against Abu Agila Masud*
PETER MACDIARMID/GETTY IMAGES



RIGHT: ***The reconstructed baggage container AVE4041, which was positioned on the left-hand side of the forward cargo hold and housed the bomb. The explosion produced a high-intensity shock wave that ruptured the side and base of the container and brought about the destruction of the aircraft*** GETTY IMAGES

blister, before bursting out in a star pattern, with fractures propagating in various directions.

The blast created a large hole in the left belly area of the fuselage, forward of the wing, approximately 1.5m wide and 5m high. The cabin floor was also affected and, within three seconds of the explosion, the forward fuselage section separated completely. At the same time, the rest of the aircraft entered a marked nose-down and left-rolling attitude. The descent then steepened and, at around 19,000ft, the jet became vertical and all four engines broke away, before the rear fuselage disintegrated completely.

Just over a year after the disaster, a similar threat was made against a Northwest Airlines transatlantic flight. Following the warning, passengers were made aware of the danger, marking a change in US policy regarding potential acts of terrorism. The flight landed safely in the United States without incident.

Pan Am, meanwhile, received harsh criticism following the bombing. The already troubled airline limped on for another three years before collapsing on December 4, 1991.

Catching the culprits

A multinational enquiry to find the perpetrators behind the bombing was launched, and various theories were put forward. Initially, the blame was laid with the Popular Front for the Liberation of Palestine General Command (PFLP-GC), an organisation based in Syria which received financial support from the Iranian government. This, it was believed, was in retaliation for the downing of an Iran Air Airbus A300 by a US Navy Cruiser, the USS *Vincennes*, on July 3, 1988, which killed all 290 people onboard.

Following this, an operation by West German police, titled Autumn Leaves, resulted in several flats in Frankfurt being raided, with members of the PFLP-GC arrested. However, a joint British/US investigation later shifted its focus to Libya, which had reportedly carried out the bombing to avenge an attack on its capital city in 1986. As the enquiry continued, the team were led to the island of Malta, after discovering that the suitcase where the bomb was hidden also contained a babygrow and a pair of trousers that had a Yorkie label. With help from the FBI, these clothes were traced to a small shop in Sliema called Mary's House.

An interview with the owner, Tony Gauci, proved pivotal. Gauci recalled selling a random collection of clothes and an umbrella a few months before the bombing. He was later shown a picture of the prime suspect, Abdelbaset al-Megrahi, and said that he looked similar to the man who had been in his shop. Records also confirmed that al-Megrahi was in Malta on the date of the transaction.

Then, in January 1989, investigators still scouring the Scottish countryside for any further evidence stumbled across the charred neckband of a shirt. Embedded inside was a fragment of a green-coloured circuit board. Further investigations by the CIA revealed that this had come from an MST-13 bomb timer, which was subsequently traced to a company in Switzerland called Mebo. The company revealed that it had indeed sold MST-13 timers to Libya, while one of its owners, Edwin Bollier, said that he knew al-Megrahi, who had an office adjacent to his in Zurich.

Further investigations revealed that al-Megrahi had arrived in Malta from Libya using a fake passport obtained from the Libyan intelligence agency on December 20, 1988, a day before the bombing of PA103. A day later, he returned to Libya, allegedly accompanied by Abu Agila Masud.

In November 1991, the US Justice Department and Scottish prosecutors announced charges against al-Megrahi and another Libyan, Al Amin Khalifa Fhimah. The pair had worked for Libyan Arab Airlines, with al-Megrahi the former head of security and Fhimah a retired station manager at Malta/Luqa airport. They were accused of putting the luggage that contained the bomb into the baggage system at Luqa for the flight to Frankfurt. Computer records from the baggage system at Frankfurt later showed that an unaccompanied suitcase had arrived from Malta and was then loaded onto the Pan Am 727 for the flight to Heathrow.

The first trial

Interviewed in Libya, the pair proclaimed their innocence. The country's then-leader, Colonel Muammar Gaddafi, refused to hand

Servisa
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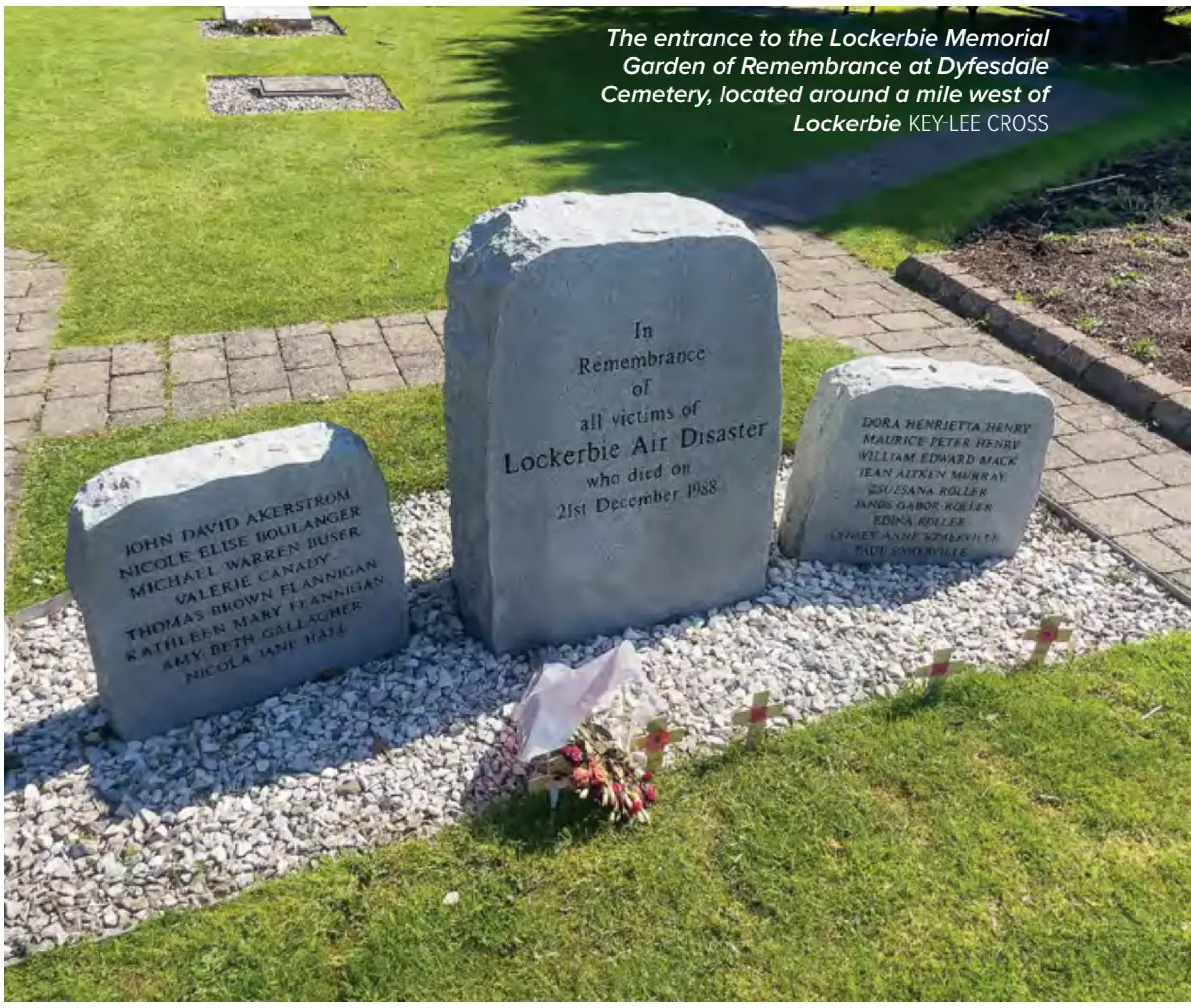
BELOW: ***Lockerbie bomber Abdelbaset al-Megrahi boards a plane at Glasgow airport on August 20, 2009, after being released on compassionate grounds from Greenock prison to return to Tripoli*** JEFF J MITCHELL/GETTY IMAGES

The memorial stone at Sherwood Crescent, with the list of names of the residents who were killed that night KEY-LEE CROSS


In Remembrance of all victims of Lockerbie Air Disaster who died on 21st December 1988
JOHN DAVID AKERSTROM
NICOLE ELISE BOULANGER
MICHAEL WARREN BUSER
VALERIE CANADY
THOMAS BROWN FLANNIGAN
KATHLEEN MARY FLANNIGAN
AMY BETH GALLAGHER
NICOLA JANE HALL
DORA HENRIETTA HENRY
MAURICE PETER HENRY
WILLIAM EDWARD MACK
JEAN AITKEN MURRAY
ZSUZSANA ROLLER
JANOS GABOR ROLLER
EDINA ROLLER
LYNSEY ANNE SOMERVILLE
PAUL SOMERVILLE

The entrance to the Lockerbie Memorial Garden of Remembrance at Dyfesdale Cemetery, located around a mile west of Lockerbie KEY-LEE CROSS

the men over for trial. Finally, after years of interventions by then UN Secretary General Kofi Annan and even South African President Nelson Mandela, an agreement was reached and the pair were brought to trial in a Scottish court at Camp Zeist, a former US airbase in the Netherlands. Fhimah was cleared, while al-Megrahi was convicted of mass murder and, after losing an appeal, was sent to Scotland to serve a life sentence.

However, not everyone was convinced of al-Megrahi's culpability. Investigative journalists Paul Foot and John Ashton published an independent report that claimed key evidence had been suppressed at the trial, a claim subsequently backed up by other reputable sources. After many years claiming his innocence, a plea that was backed by a number of the victims' families, the case was referred to the appeal court by the Scottish Criminal Cases Review Commission in 2007. In the appeal, it was stated that nothing was found to suggest that any evidence in the original trial had been tampered with. However, they questioned Gauci's evidence and believed that al-Megrahi may have been the victim of a miscarriage of justice.

BELOW: ***Portraits of some of the victims in the Remembrance Room in the grounds of Tundergarth Church*** ALAMY/ PA IMAGES

WE REMEMBER
www.PA103LL.org
PAN AM 103 LOCKERBIE LEGACY FOUNDATION
WE REMEMBER

Then, in 2008, al-Megrahi, by now more commonly known as 'the Lockerbie bomber', was diagnosed with terminal cancer. The second appeal was abandoned in 2009. He was released from HMP Greenock on compassionate grounds and returned to Tripoli to cheering crowds. He died in 2012.

By this point, Colonel Gaddafi's regime had been toppled, offering renewed hope that new details could be shed on the disaster. Scottish and American investigators headed to Libya to meet up with the new authorities.

In 2015, the US Attorney General and Scotland's Crown Office revealed that they now had two new suspects: Abu Agila Mohammad Mas'ud Kheir Al-Marimi, known as Masud, and Gaddafi's former intelligence chief, Abdullah al-Senussi. However, a civil war then broke out in Libya and the pair were never interviewed.

A third posthumous appeal to clear al-Megrahi's name began in 2017. Once again, it was rejected by Scottish judges, who chose to uphold the verdict delivered at Camp Zeist two decades earlier.

New suspects

However, on the 32nd anniversary of the bombing, the US announced formal charges against Masud, who was serving a prison sentence in Libya. They claimed that Masud was an ex-Libyan intelligence officer and had built the bomb on the orders of Gaddafi. They also said that he had acted alongside al-Megrahi and Fhimah.

In December 2022, Masud was handed over to the US authorities and placed into custody. Since then, he

In memory of our colleagues and friends
RUSSELL BERRELL
DECEMBER 21, 1988

ABOVE: ***The Pan American World Airways plaque, with the list of the 16 names of the crew members who were killed onboard Flight 103*** KEY-LEE CROSS

The Crew of Pan Am 103

Name	Age	Role	Nationality
James Bruce MacQuarrie	55	Captain	American
Raymond Ronald Wagner	52	First Officer	American
Jerry Don Avritt	46	Flight Engineer	American
Geraldine Murphy	51	Senior Purser	British
Milutin Velimirovich	35	Purser	Czechosolvakian
Stacie Denise Franklin	20	Flight Attendant	American
Jocelyn 'Kim' Reina	26	Flight Attendant	American
Myra Josephine Royal	30	Flight Attendant	American
Siv Ulla Engstrom	51	Flight Attendant	Swedish
Lilibeth Tobila McAlolooy	27	Flight Attendant	Filippino
Paul Garrett	41	Flight Attendant	American
Irja Skabo	38	Flight Attendant	Norwegian
Elke Etha Kuhne	43	Flight Attendant	German
Maria 'Nieves' Larrachoecha	39	Flight Attendant	Spanish
Noëlle Berti-Campbell	41	Flight Attendant	French
Nichole Elizabeth Avoyne-Clemens	44	Flight Attendant	French

has pleaded not guilty to two counts of destruction of an aircraft resulting in death, alongside another charge of destruction of a vehicle resulting in death.

Masud was scheduled to face trial in Washington on May 12, 2025. However, the district court judge agreed to postpone the trial due to Masud's ill health and following submissions from both the prosecution and defence. The teams said that owing to the "complex, international nature" of the case, they had insufficient time to prepare for both the pretrial proceedings and the trial itself. The trial is now set to take place in April 2026. Masud continues to proclaim his innocence.

In March this year, Scottish detectives announced that they were examining documents from inside Libya's intelligence service that proved that Gaddafi's Jamahiriya Security Organisation (JSO) was behind the destruction of Pan Am 103, along with the destruction of French airliner UTA Flight 772, operated by a McDonnell Douglas DC-10-30, N54629 (c/n 46852), over Niger on September 19, 1989. According to reports, the new documents, if authenticated, could be used in the trial against Masud and might also lead to fresh prosecutions.

Almost 40 years after the crash, many questions remain unanswered for the families of the victims. Two-thirds of those casualties were American and, until the 9/11 attacks, Pan Am 103 remained the worst terrorist attack on the US. In total, 54 UK citizens were killed in the disaster, 43 on board the 747 and 11 on the ground, and it remains the worst act of mass murder in British legal history. AW

IN REMEMBRANCE OF ALL VICTIMS
OF LOCKERBIE AIR DISASTER
WHO DIED ON 21st DECEMBER 1988

RIGHT: ***The full list of names of the victims of the bombing of Pan Am Flight 103 on December 21, 1988,*** KEY-LEE CROSS

AIR ACCIDENTS UNCOVERED

THIS IMAGE: AIRTEAMIMAGES.COM/DARÍO DUQUE GÓMEZ. SUPPLEMENT COVER: CHARLES CARATINI/AFP VIA GETTY IMAGES

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OH-LZN
AIRBUS A321

There's no business like Snow business

Robert Veitch visits Helsinki and Ivalo to discover how the hub and spoke keep aircraft operating throughout the winter season, thanks to airport operator Finavia's world-leading SnowHow programme

ABOVE: ***Finnish pilots are accustomed to winter operations and view them as normal*** AIRTEAMIMAGES.COM/ KRISTIAN BLITSON

Winter operations at airports follow similar themes around the world, although the length of season, volume and regularity of snowfall can vary tremendously. At Helsinki, heavy snow falls are expected from November through to April and the temperature can drop to -25°C, but the runways remain open and the aircraft keep moving.

Finavia's airfield maintenance team and it's SnowHow concept functions successfully thanks to the application of years of accrued experience, from daily consultations, weekly meetings, ongoing collaboration with the Finnish Meteorological Institute and data-driven decision-making from nine sensors embedded in the runways around the airport. Those sensors have the capacity to melt the snow in close proximity around them and, as the water refreezes, they measure ground temperature to find the true freezing point.

A dedicated snow desk monitors the weather, organises staff, assigns vehicles and maintains contact with airlines, ground handlers and air traffic control (ATC), so when a snowstorm arrives, everyone knows exactly what to do. In 2003, the last time winter weather impacted operations at Helsinki Airport there was a 30-minute interruption to aircraft movements. It's a formidable record to maintain.

Chilling out in Helsinki

Anne Järvinen, Finavia's head of airfield maintenance at Helsinki, showed *Airliner World* some of the snow-clearing equipment. "My name in English actually means winter blizzard," she chuckled, while standing alongside the primary weapon in the battle with the white stuff: the Vammas PSB 5500, named from abbreviating *plough, sweep,* and *blow*, and its 5.5m working width. It was developed by Vammas in consultation with Helsinki Airport. Each machine weighs 31 tonnes, is 82ft long, 12ft high and 24ft wide when the plough is deployed – Helsinki has 20 of the machines, which cost a cool €1m each.

They are powered by two 500hp engines, one for locomotion, the other powering the equipment, and with ten machines in a structured echelon, they can clear a single runway at speeds of up to 40mph. The 5500 comprises a

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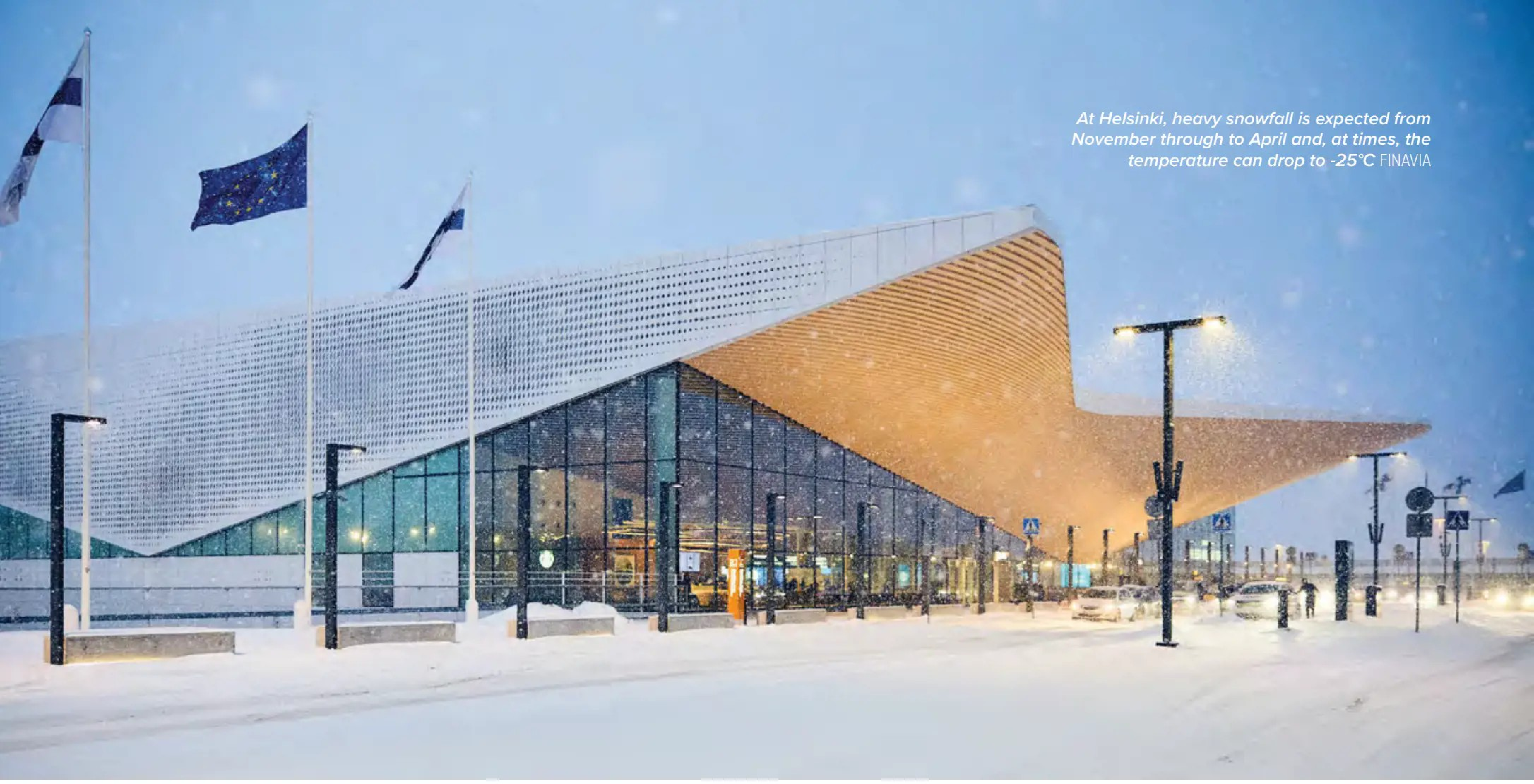


At Helsinki, heavy snowfall is expected from November through to April and, at times, the temperature can drop to -25°C FINAVIA

> **“To keep aircraft on schedule, we have 13 minutes to clear the runway, but we can do it in 11”**

ABOVE: ***An echelon of Vammas PSB 5500s can clear a Helsinki runway of snow in 11 minutes*** FINAVIA

snowplough, a steel or polypropylene brush sweeper and a blower capable of expelling air at up to 260mph. The plough has independent spring-loaded cutting segments along its lower edge for maximum contact with the ground, but is made of plastic to avoid damaging lights embedded in the tarmac. It has a lifespan of 20 years, with a heavy check – equivalent to an aircraft D-check – every ten years.

Järvinen said: “To keep aircraft on schedule, we have 13 minutes to clear the runway, but we can do it in 11.” Usually, ten machines will work on one of the airport’s 200ft-wide runways, with another five on the taxiways and aprons, and five held in reserve. Helsinki’s trio of strips are 9,518ft, 10,039ft and 11,483ft long. Snow is pushed off the runway and taxiway shoulders onto the grass, to ensure aircraft wings do not come into contact with any drifts.

Runways take priority, then taxiways and finally aprons, with action usually commencing when snow depth reaches 1mm-3mm. At peak times, when the weather is most inhospitable, runways can be cleared as frequently as every 20 minutes. Sweeping patterns last up to 75 minutes each, and ATC are aware of the various snow-clearing patterns, to enable adjustments to aircraft movements. Piled up snow around the airport is manually moved in trucks to remote areas around the facility, and Järvinen estimates that 1cm of snowfall across the 3.5 million square metre airfield, equivalent in size to downtown Helsinki, equates to around 1,100 truckloads.

At 1,520hp, the Øveraasen TV 1520 snowblower is the most powerful in Finland and there are three of the €3m machines at Helsinki, with two more on the way. Each has a cutting surface 11ft wide, comprised of half-inch thick cylindrical steel blades that can harvest up to 10,000 tonnes of snow per hour, casting it distances up to 160ft. Järvinen said that dry snow in temperatures well below freezing is actually easier to manage, while wet snow can be more problematic because it freezes into blocks.

De-icing a runway with a potassium formate liquid takes an hour, but each time the runway is cleared, de-icer needs to be reapplied, meaning that most actions are preventive. Salt is corrosive to aircraft, so Helsinki uses up to 1,000 tonnes of fine sand each year, which does not damage jet engines. The Helsinki de-icing hold pads have capacity for five aircraft, where the team deal with them immediately prior to departure. Their proximity to the runway threshold extends holdover time for as long as is practical.

All of Finavia’s snow-clearing equipment is fitted with winter tyres and painted bright yellow for visibility. A giant hangar houses the machinery, which is maintained in a constant state of readiness thanks to daily and weekly checks, with major servicing scheduled for the summer season.

The Helsinki SnowHow team comprise around 140 staff, operating about 200 pieces of machinery, with another 130 seasonal members employed during the winter. From October to April there are a minimum of 20 staff present on 12-hour shifts running 24/7, with adjustments

BELOW: ***The steel brush sweeper on the Vammas PSB 5500*** KEY-ROBERT VEITCH to numbers made as they become necessary. "We promise summer-like conditions on our runways all year round," remarked Järvinen with a smile. "In Helsinki, winter is a very real thing."

The snow must go on

Pilot training is key to tackling the hazards of winter flying. For Finnair, its Flight Academy is at the vanguard of this, imparting expertise in cold weather operations to its own pilots and third-party airlines. Located two miles from Helsinki Airport, it offers full flight simulator training for the Airbus A320, A330, A350, Embraer and ATR aircraft.

Matti Keskinarkaus, vice president of flight operations at Finnair and head of training until August 2025, hails from Rovaniemi and "loves winter". He said the Academy is proud of its training curriculum and regards safe winter operations as being a combination of well trained skilled pilots and threat management: "We train pilots for different kinds of winter challenges, to train beyond their limits to extend those limits." The airline has 5,600 staff in total, of which around 1,000 are pilots operating the 80-aircraft fleet. As Matti put it: "It's good to find your limit in the sim, so it doesn't happen for real. Always have options, never leave yourself without options."

Finnish pilots are accustomed to winter operations and view them as normal, and undergo continual training to keep their skill sets sharp, echoing the words of Apollo 8 commander, Frank Borman: "A superior pilot uses his superior judgement to avoid situations which require the use of his superior skill."

ABOVE: ***A superior pilot uses superior judgement to avoid situations which require the use of superior skill***
KEY-THOMAS HAYNES

RIGHT: ***As the aircraft descends towards Ivalo, a landscape more familiar to Sir Ranulph Fiennes filled the window***
KEY-ROBERT VEITCH

The far north

Finavia operates 20 airports across Finland and the following morning it was time to visit another. The new check-in area at Helsinki sits beneath a stunning hygge-esque ceiling constructed from Finnish spruce. Finnair's home hub is a calm and relaxing space and certainly not as busy as a facility processing more than 16 million passengers a year should feel. Aboard Finnair Airbus A321-231, OH-LZI (c/n 5922), on flight AY603 to Ivalo, all was well and on time, helped in part by the good work of the SnowHow team.

Around 500 miles north of Helsinki in the Arctic Circle, winter life is considerably more brutal than further south. It includes a period of almost zero daylight called kaamos (polar night), with the summer alternate known as yötön yö (nightless night).

Finavia operates five airports in Lapland and passenger numbers have increased by 19% since 2023, primarily due to an increasing number of direct seasonal flights. During 2024, those five facilities processed 1.7 million passengers, comprising Rovaniemi (948,000), Kittilä (412,000), Ivalo (249,000), Kuusamo (126,000) and Kemi-Tornio (33,000). Seasonality means winter is extremely popular, although regional marketing company Lapland North Destinations is keen to generate more summer traffic.

Rovaniemi is the Lapland powerhouse and has increased its passenger

»

FINAVIA
IVALO AIRPORT
Entrance

BELOW: ***Ivalo is one of five Finnish Lapland airports that Finnair flies to year round***
KEY-ROBERT VEITCH

BELOW RIGHT: ***The business end of the Øveraasen TV 1520 snowblower, which can clear up to 10,000 tonnes of snow per hour***
KEY-ROBERT VEITCH

FINAVIA
IVALO AIRPORT

ABOVE: ***The Øveraasen TV1520 snowblower in action at Ivalo***
FINAVIA

> **“Ivalo is the most northerly airport in the EU and endures winter conditions from October to April, including up to 200 snow days each year”**

numbers by 29% since 2023, offering three permanent routes – Helsinki, Tromsø and Bergamo – and 46 seasonal routes. It is referred to as the ‘Santa Claus’ airport, in tandem with Finnair which has been “the official airline of Santa Claus” since 1983. All of which means that keeping these airports functioning to schedule is critical in keeping the wheels of aviation turning.

Ivalo is the most northerly airport in the EU and endures winter conditions from October to April, including up to 200 snow days each year. As our aircraft descended beneath the cloud base, a landscape more familiar to Sir Ranulph Fiennes filled the window: a binary-hued, deep midwinter world of snow and shade, frozen rivers and coniferous forests. Soon after, while descending the airstairs, the sense of wonder that such a facility exists and functions in this frigid landscape was quite staggering. Welcome to Ivalo, where the local time is 1300hrs and light levels are an Arctic, bracing grey.

Snow secrets of Ivalo

Ivalo is located 68° north (London is 51°), 200 miles inside the Arctic Circle and 25 miles west of the Russian border, although aircraft keep clear of Russian airspace. The municipality is home to around 7,000 people, with tourism being a primary source of income for residents, making the airport an essential part of local infrastructure. Sustainability has been progressive at the net-zero certified airport, which is now heated by biofuels, with airport vehicles powered by renewable diesel. Ivalo is one of five Finavia airports that are carbon neutral, the others being Helsinki, Kittilä, Kuusamo, and Rovaniemi.

Jarmo Pyhäjärvi has been airport manager at Ivalo since 2012 and revealed punctuality at the airport is ”around 98%”, pointing out the facility has never closed for bad weather. Keeping an Arctic airport operational with such a high degree of dependability takes plenty of planning. The facility operates based on the requirements of air traffic, rather than on regular stated hours and, as a consequence, some staff have more than one role. Airport employees number 25 in the summer and 50 in the winter, with 15 in the snow team. ”One minute they might be checking in a bag, the next they’re driving a snow plough,” Jarmo explained. Last winter, the lowest recorded temperature was -32°C, although in 1999 “they carried on working” at -50°C, the coldest ever recorded temperature. Weather forecasting and continuous training are key to ongoing success for the team, who begin preparing for the next winter before the current one is over.

Close co-operation between the airport and airlines is essential for runway readiness. With fewer aircraft movements outside of peak season, the team correlates its work with flight times and weather forecasts to make the most efficient use of the equipment. A runway ‘snowbot’ developed in

BELOW: ***The snowplough on the front of this Ivalo-based tractor is six metres wide***
KEY-ROBERT VEITCH

partnership with five Finnish companies to automate runway clearing in the future has been tested here, but, for now, the work is the domain of hardy souls in the cabs of the machinery.

Outside, in unbelievably cold conditions somewhere off the bottom of the thermometer, there was a engrossing demonstration of the machinery's capabilities. Up close, the muscular force of the equipment was evident, as 300mm of snow was reduced to 10mm in a single sweep. The Vammas PSB 5500s worked in tandem, following the snowblower, which chomped through snowdrifts like the proverbial warm spoon through ice cream. Each piece of machinery has a different purpose and various combinations are employed to create the most efficient and effective solution. Despite the robust power of the equipment, its deployment was a delicate choreography of minimal overlap and maximum clearance in each echelon. Sweeping, swirling orbits mesmerised onlookers as deep drifts of snow were ruthlessly cleared away, freeing up the taxiway for the next arrival.

Pyhäjärvi said that a layer of snow is usually left on the runway to protect it from freezing rain: "We let the snow act as a shield." This is cleared prior to arriving or departing aircraft movements. Freezing rain is highly undesirable, particularly when it's super-cold and coming from the Barents Sea to the north.

In under 20 minutes, the team showed off its effectiveness in blizzard-like conditions. Viewing the spectacle a few minutes later from the top of the ATC tower, the snow clouds were clearing and blue skies were forming. Readiness and preparation is key to everything this far north.

ABOVE: ***The Ivalo apron from the top of the ATC tower. A layer of snow is used as a shield against freezing rain from the Barents Sea***
KEY-ROBERT VEITCH

Snow me the way to go home

Finnair is the only airline to operate year-round from Helsinki to the five Finnish Lapland airports. With a new found admiration for snow teams in general, not just Helsinki and Ivalo, the stroll out to the aircraft with a soft crunch beneath the feet, offered greater significance than before. Flight AY604 taxied to the southwestern end of Ivalo's runway 04/22, performed an 180° pirouette, then powered up for the flight – all made possible by knowledge accrued from decades of experience, ongoing education and the efforts of the men and women in the yellow cabs. **AW**

Many thanks to the collective spirit from the teams at Finnair, Finavia and PC Agency for their help with this article

RIGHT: ***Pirouetting at Ivalo just prior to the take-off roll along the freshly cleared strip***
KEY-ROBERT VEITCH

FINNAIR
AIRPRO
AIRPRO
A328

BELOW: ***A soft crunch beneath the feet on the way to boarding Finnair flight AY604 on Airbus A320-214, OH-LXD (c/n 1588)***
KEY-ROBERT VEITCH

Flair

Paolo Giannico looks back at the life and times of Canadian ultra-low-cost carrier Flair Airlines

Canadian ultra-low-cost carrier (ULCC) Flair Airlines has established its position in a market dominated by Air Canada, WestJet, Porter Airlines and Air Transat. It follows the traditional budget carrier business model offering low fares and charges for additional services and has mitigated challenges over the years, including intense competition and economic impact caused by the COVID-19 pandemic.

Independent ULCCs that specifically target visiting friends and relatives (VFR) traffic, as well as cost-conscious consumers, have been few and far between in Canada over the years. The Edmonton-headquartered airline was strategically positioned to capture this niche market and establish itself as the country's primary discount carrier.

Where it all began

Founded as Flair Air in 2003 by Jim Rogers in Kelowna, British Columbia, operations commenced on August 19, 2005, offering passenger and cargo charters across Canada and the United States. The initial fleet comprised a pair of Boeing 727-200s – C-FLHR (c/n 21524) configured for passenger operations and C-FLHJ (c/n 21455) as a pure freighter. With increasing demand from the Canadian oil industry, a 156-seat Boeing 737-4B3, C-FLEJ (c/n 24751), joined the fleet in December 2008, and four more examples would follow by the end of 2015.

Within five years, the young airline had built a diverse aircraft, crew, maintenance, and insurance (ACMI) operation and was carrying more than 10,000 passengers per month. It acquired contracts with the Canadian Department of National Defence and with Shell Canada to shuttle employees to the oil fields in northern Alberta, which resulted in the leasing of two additional 737-400s. So by 2010 the 727s were phased out.

With the 737-400 fleet, Flair transitioned from ACMI to passenger charter flights throughout North America, Europe and South America. In 2016, NewLeaf Travel, a

factor

BELOW: ***Flair Airlines Boeing 737 MAX 8, C-FLHI (c/n 61804), seen here departing Vancouver, has been with the airline from new in June 2021, but was leased to defunct Australian carrier Bonza, for five months from December 2023*** AIRTEAMIMAGES.COM/ALVIN MAN

virtual airline based in Winnipeg, Manitoba, contracted Flair to operate flights to five Canadian destinations. This partnership resulted in more than 2,200 rotations, carrying over 250,000 passengers on its network.

Low-cost operations

On June 7, 2017, the airline acquired NewLeaf Travel for an undisclosed amount, which allowed it to enter Canada's ULCC market. Rogers stepped down as CEO in January 2018 and sold his Flair Air shareholding to a private group of investors led Jerry Presly, a British Columbia businessman who became executive board chairman. Rogers agreed to serve as an advisor to the airline for the following year. Presley hired Jim Scott, a former Cathay Pacific pilot, founder of Canada Jetlines, and VP of Central Mountain Air, to become CEO.

Under Scott's leadership, significant improvements in customer service were initiated by offering a premium ULCC service and enhancing operational reliability. The focus was on balancing growth, cost reduction, brand elevation and continuous investment to improve the customer experience. In July 2017, Flair Air rebranded as Flair Airlines, and moved its headquarters from Kelowna to Edmonton.

In December 2018, three 737-800s were leased from Czech carrier Smartwings: C-FBVS (c/n 32907), OK-TSR (c/n 40875) and OK-TSS (c/n 35272). The acquisition marked a significant shift as it initiated the phasing out of the aircraft in the 737-400 fleet, which by then were nearly 30 years old. By the first quarter of 2020, the airline had introduced an additional 11 737-800s.

The rebrand

In February 2019, Scott shifted the airline into the next decade with its 'Plane and Simple' rebranding. The livery changed from purple and red to acid green and black, and new crew uniforms were introduced in September the same year. In April 2019, Scott and Presley entered an equity investment deal with the Miami-based investment company 777 Partners, who acquired a 25% stake in »

LEFT: ***The February 2019 'Plane and Simple' rebranding incorporated a new acid green and black livery*** ALL IMAGES FLAIR AIRLINES UNLESS STATED

the airline. The sum invested was not disclosed, but 777 Partners said it would provide up to 50 Boeing narrowbodies and give it veto rights on future aircraft lease deals.

At the time of the deal, Steve Pasko, co-founder and managing partner of 777 Partners, said: "The aviation sector continues to be ripe for innovation and Flair is well-equipped to provide affordable airfare for Canada's underserved market.

Despite having a strong potential market for ULCCs, Canada trails behind the rest of the world in this sector. Through this investment, we want to create a viable alternative for consumers in the region, who have faced a lack of air transportation choice until now."

In March 2020, Canadian commercial aviation – along with the rest of the world – was significantly impacted by the COVID-19 pandemic, with travel and the health restrictions imposed by the government. Along with Air Canada and WestJet, Flair was nimble enough to shift into delivery services and charter work to meet the ever-increasing demand to move goods and repatriate Canadians.

During the pandemic, Flair sought support with the goal of elevating and gaining Canadian advocacy, but the government did not develop a comprehensive programme to support small- and medium-sized carriers. As a result, Air Canada and WestJet became dominant following the closure of many smaller airlines, such as Island Express Air and Sky Regional. Flair was able to attract further investment and continued operations by providing Canadians with a cost-effective option for regional and national travel.

In August 2020, the last three 737-400s were retired to streamline the fleet and additional 737-800s joined on short-term leases until 2021, increasing the total number of aircraft to 19. In October 2020, Jim Scott retired and was succeeded by Stephen Jones, former managing director of Wizz Air Hungary and deputy CEO of Wizz Air.

In January 2021, the airline announced it would lease 13 737 MAX 8s from 777 Partners. The first, C-FLEJ (c/n 64941), arrived in May, with an additional four aircraft added the same year through long-term operating and finance agreements with BOC Aviation of Singapore. On June 10, 2021, the inaugural flight of C-FLEJ departed Edmonton for Toronto, the aircraft allowing the airline to achieve the lowest cost-per-seat-mile of any Canadian carrier. It reduced fuel consumption and CO_2 emissions by 14%, aligning with its ambition of becoming Canada's 'greenest' airline. In December 2021, the airline announced plans to lease a further 14 737 MAX 8s and, by the end of 2022, it had 13 MAX 8s and three 737-800s aircraft in its fleet.

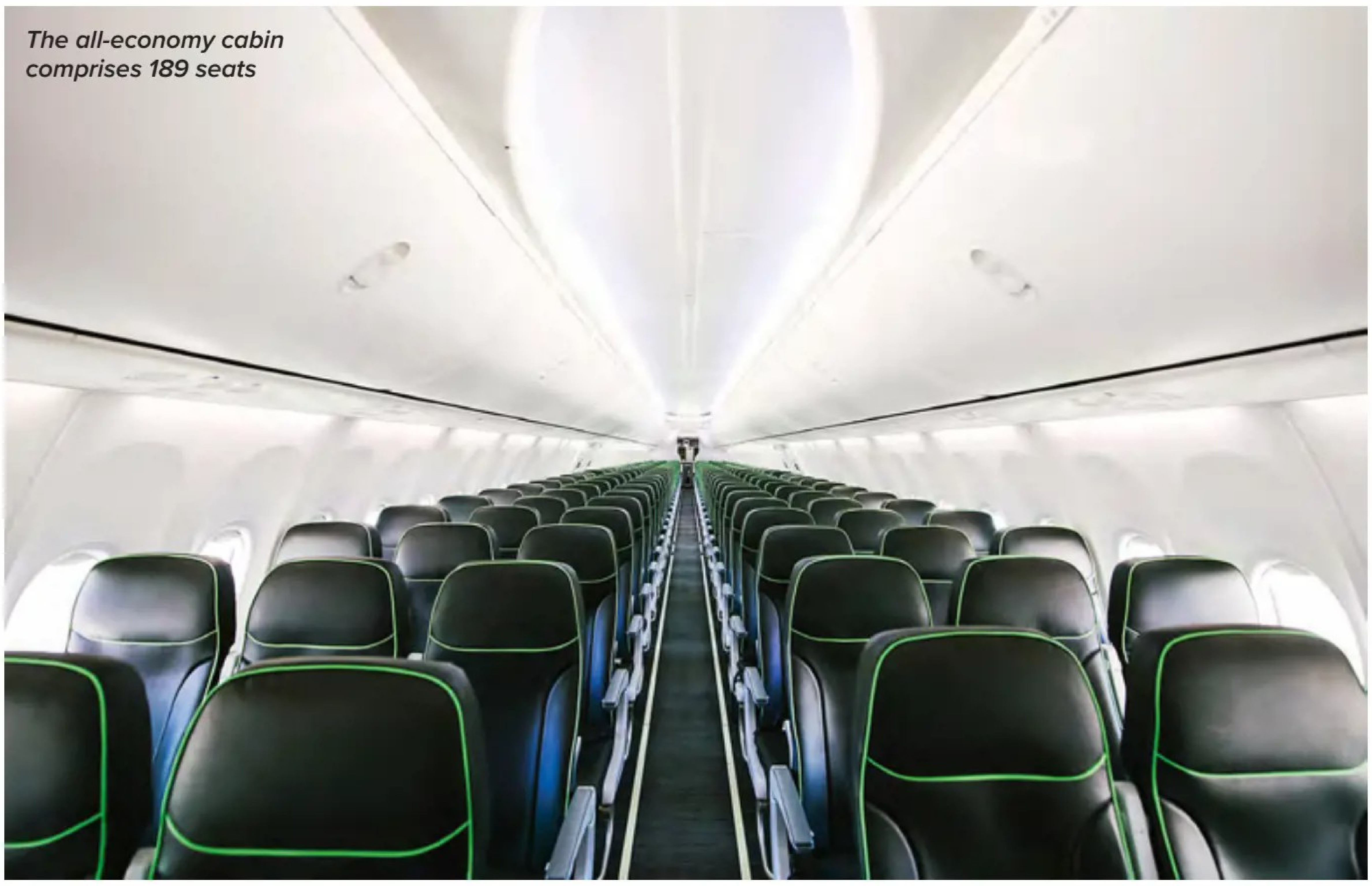
Bumps

In December 2021, Canadian newspaper *The Globe and Mail* reported that Flair was under investigation by the Canadian Transport Agency (CTA) for ownership and financial agreements with 777 Partners. In 2020, Jocelyn Harris, Flair's former VP of finance, had claimed that 777 Partners was the lead decision-maker at the company, violating Canadian laws prohibiting foreign investors from holding more than 25% of an airline's shares and controlling company decisions.

When questioned, Stephen Jones stated: "The reviews by the CTA are a standard procedure within

BELOW: ***Flair Boeing 737 MAX 8, C-FFLZ (c/n 64946), joined the fleet in June 2022 and is captured here departing Vancouver*** VINCENZO PACE

"In July 2017, Flair Air was rebranded as Flair Airlines and moved its headquarters from Kelowna to Edmonton"



The all-economy cabin comprises 189 seats

The airline received C-FLKJ (c/n 64945) direct from Seattle/Boeing Field on November 16, 2021

the Canadian aviation sector. We are a Canadian airline, 58% of our ownership is Canadian and we employ numerous Canadians nationwide. We are confident in our compliance."

The CTA granted the airline an 18-month exemption and, after an investigation was concluded on June 1, 2022, stated that Flair Airlines was a Canadian company.

The airline experienced a surge in travel during the summer of 2021 and focused on an increase in demand as COVID-19 restrictions were eased. Jones stated in an interview with a Canadian media outlet: "It's our belief that by that time the vaccination rates will be higher and the pandemic will be under much more control than it has been, and the demand is going to rocket. It's going to rocket in the price-sensitive leisure sector first, which is where Flair has carved out its market."

Seizures

On March 11, 2023, agents representing four Irish leasing companies – Columbia Lights Aviation, Corvus Lights Aviation, MAM Aircraft Leasing 4, and Airborne Capital – repossessed four Flair 737s at Toronto, Kitchener/Waterloo and Edmonton airports. The action was instigated after the airline was alleged to have missed lease payments accumulating to $5.4m between September 2022 and March 2023.

Flair sued the lessors for $50m, claiming breach of contract, while the lessors countersued in the Ontario Superior Court, seeking damages and alleging they incurred millions in costs from repossessing, repairing, re-leasing or selling the four aircraft involved. At the time, Jones described the actions as "draconian" and indicated that operational constraints caused by a difficult Canadian winter had led to

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Flair's basic fare includes a seat from A to B, with extras like food and drink, seat selection and baggage available at additional cost

delays in lease payments. The lessors claimed the airline's lawsuit was an attempt to recover losses caused by its own defaults on the aircraft leases.

In an email to *The Globe and Mail* on July 3, 2025, Maciej Wilk, Flair's current CEO, described the countersuit as "the predictable response to Flair's initial claim that the aircraft lessors wrongfully seized the aircraft." He affirmed Flair would continue its relationship with customers, lessors and industry partners, and intends to operate his airline as a reliable and affordable Canadian operator. At the time of writing, there has been no ruling from the court.

Developing opportunities

During 2022, Flair added more routes across Canada, the US and Mexico, and increased flight frequencies using aircraft based in Vancouver, Abbotsford, Edmonton, Winnipeg, Toronto and Kitchener/Waterloo. Its growing fleet required a total of 24 cabin crew and 12 pilots to operate each aircraft unit, along with other roles in maintenance and other positions. To address Canada's pilot shortage, it recruited experienced flight crew from overseas and those laid off during the pandemic. In August 2023, a cadet programme was established in partnership with Genesis Flight College and pilot training expert Canada Training Solutions (CTS Aero), with the intention of creating a steady pipeline of 737 MAX 8 first officers within 18 months of entering the programme.

In 2024, the airline reported an increase in revenue and flight frequency, which coincided with a higher flight completion rate and improved on-time performance. In a *Business in Vancouver* magazine interview with Eric Tanner, Flair's VP of commercial operations, he estimated the company's 2024 revenue to be between $500m to $800m, based on approximately 100 flights per day. He also reported a 25% increase in year-on-year unit revenue.

Flair concluded 2024 with a flight completion rate of 98.7%, positioning itself as Canada's most reliable airline, followed by WestJet at 97.4%, Porter Airlines at 97.3% and Air Canada at 96.5%. It introduced Canada's first on-time guarantee to uphold the airline's commitment to punctuality and currently offers compensation for any delays and cancellations. Flight delays of more than 60 minutes or cancellations within 72 hours of the scheduled departure time entitle passengers to a CAD$60 e-voucher for future bookings.

ABOVE: ***Each aircraft unit requires a pool of 24 cabin crew and 12 pilots to operate it, along with other associated roles in maintenance and other positions***

Across the year it had increased flight frequencies by 50% between Abbotsford, Vancouver, Calgary and Edmonton and introduced direct flights to Guadalajara, Mexico, from Toronto and Vancouver. By focusing on popular routes, the intention was to use its fleet more efficiently, and it had flown 4.5 million passengers by the end of the year. This growth was driven by heightened demand for both domestic and international travel. Elsewhere, the airline found itself owing the Canadian government $67m in unpaid taxes for import duties on its 737 MAX 8 aircraft, which was settled without any operational impact.

New direction

After four years at the helm, Jones retired in the summer of 2024, to be replaced by Maciej Wilk on an interim basis, confirmed as permanent in July 2025. Wilk joined Flair in April 2023 as chief operating officer (COO), overseeing flight operations, operations control centre, maintenance and airports. His background included ten years at LOT Polish Airlines, including a spell as COO from 2018-2023. Wilk's initial focus was on routes with the highest demand, creating more flight frequencies between key market cities. His strategic move has allowed fleet efficiency maximisation and offers passengers increased flexibility while reinforcing the airline's commitment to accessible travel.

The business model

Maciej Wilk has maintained Flair's principles of a strong short- to medium-haul network, low fares and transparent pricing. The basic fare

BELOW: ***The airline has operated Boeing 737 MAX 8, C-FLEJ (c/n 64941), the first of the type in the fleet, since May 26, 2021***

includes a seat from point A to B, with extras like food and drink, seat selection and baggage available at additional cost to help generate non-ticket and onboard revenues. Quicker turnarounds are possible with less baggage on board the aircraft, and increased fuel efficiency from lower take-off weights. Other efficiencies include a quicker check-in for passengers using digital boarding passes.

This approach to low-cost operations has made Flair a market leader in Canada. It strives to reduce costs by employing typical ULLC principles such as a high aircraft utilisation, high density seating, cost effective flight scheduling and a single aircraft fleet.

ABOVE: ***The airline has had two aircraft registered C-FLEJ, but the first was a Boeing 737-4B3, (c/n 24751), which joined the fleet on December 6, 2008***
AIRTEAMIMAGES.COM/ FELIX GOTTWALD

RIGHT: ***Maciej Wilk was confirmed as the permanent CEO in July 2025***
FLAIR AIRLINES/ MAKENZIE CALLE

BELOW: ***Flair Airlines Boeing 737 MAX 8, C-FLKD (c/n 61806), seen here at Vancouver, was with the airline from July 2021 until it was repossessed on March 11, 2023***

Network and future

Operating from its primary hub at Edmonton, Flair maintains operational hubs across Canada, including Vancouver, Calgary and Toronto/ Pearson connecting passengers to 35 destinations throughout Canada, the US, Mexico and the Caribbean. As of April 2025, flights to Nashville and Phoenix were suspended due to reduced bookings arising from the ongoing trade war between Canada and the US, and the falling value of the Canadian dollar.

As a result, the airline reallocated its aircraft to alternative domestic and international routes. The most heavily trafficked route, connecting Vancouver and Toronto, saw a 71% increase to 24 frequencies per week. This strategic approach offers passengers greater flexibility and affordable options while reinforcing the carrier's commitment to making air travel accessible to all Canadians.

Despite not being part of a major airline alliance, Flair has established codeshare agreements with Air Transat, KLM and Air Europa, creating a wider range of travel options. Its management practices, low fares and efficient aircraft fleet comprising two 737-800s and 18 737 MAX 8s is strategically positioned as the sole Canadian ULCC. It remains a strong competitor to more established full service carriers such as Air Canada and WestJet in key North American markets as it expands its routes during the post-pandemic spike in travel. AW

> "In 2024, Flair introduced Canada's first on-time-guarantee to uphold the airline's commitment to punctuality, and currently offers compensation for delays and cancellations"

Lease-y

OH
Virgin
G-VOOH

Aircraft leasing has become an increasingly important part of the airline industry, with more than half of the world's commercial fleet leased by operators rather than owned outright. This is a marked difference from 50 years ago, when the majority of the global aircraft fleet was owned by the airlines that operated the aircraft. The trend has reshaped the way airlines manage their balance sheets and how they plan their current and future fleets.

At its simplest, leasing allows an airline to use an aircraft without committing to a full purchase upfront. Instead of tying up hundreds of millions in capital, airlines pay a rental fee to a lessor, a company that owns the aircraft, for a period of time that can stretch to a decade or longer. This model provides flexibility, enabling carriers to adjust fleet size in response to seasonal demand, new routes or market shocks, and to free up capital for operations, staff or other investments. Broadly, leases fall into operating leases, sale-and-leaseback (SLB), hybrid forms and finance leases.

Wet or dry?

The terms dry, wet and damp leases refer to how much responsibility the lessor and lessee each take in day-to-day operations.

A **dry lease** (also referred to as an operating lease) is the most hands-off arrangement for the lessor. The leasing company provides the aircraft, but everything else – from the crew and maintenance to insurance and operations – is handled by the airline leasing it. The aircraft operates under the airline's own Air Operator's Certificate (AOC), making this a popular option for established carriers that already have the infrastructure to manage their fleets.

At the other end of the spectrum is the **wet lease**, a more comprehensive package in which the lessor supplies not just the aircraft, but also the crew, maintenance and insurance, often referred to collectively as ACMI or aircraft, crew, maintenance, and insurance. In this set-up, the aircraft operates under the lessor's AOC, and the lessee is provided with a ready-to-fly service. Wet leases are often used to cover short-term capacity gaps, seasonal peaks or when an airline is waiting for new aircraft deliveries.

Between the two sits the **damp lease**, a hybrid arrangement that includes only part of the crew – typically the flight deck – while the lessee provides its own cabin crew. This middle ground allows airlines to maintain some brand consistency in customer-facing roles while benefitting from the operational support of the lessor.

Sale-and-leaseback

Sale-and-leaseback is not a leasing 'type' per se, but rather a structural technique that provides additional flexibility for the airline. In this arrangement, an airline sells an aircraft, often newly delivered or only lightly used, to a lessor, then immediately leases it back under a fresh contract, which is frequently structured as an operating lease.

does it

In the latest instalment of our *How it Works* series, **Edward Paine** looks into the complex but critical world of airliner leasing

virgin atlantic
BOEING 787-9
Miss Chief

BELOW: ***Virgin Atlantic Boeing 787-9 Dreamliner, G-VOOH (c/n 37968), has been leased from AerCap since delivery in 2015***
VINCENZO PACE

The lease terms in SLBs typically mirror the lessor's standard operating lease terms of 10–12 years for narrowbodies and shorter or staggered periods for widebodies, depending on demand and aircraft age.

SLBs allow the airline to free up capital tied up in the aircraft, which may have appreciated, while retaining full operational use. The lessor assumes remarketing, maintenance and disposal risk over the term of the lease. SLBs are especially appealing when aircraft values are strong or when an airline faces capital constraints but wants to maintain use of their fleet.

The financial lease

With a **finance lease**, the lessor purchases the aircraft, but the airline takes on the bulk of the operational and financial responsibilities. Unlike an operating lease, which is usually short-term and more flexible, a financial lease typically covers most of the aircraft's economic life and the arrangement more closely resembles a traditional loan: the lessee makes a larger upfront payment and higher monthly instalments over the lease term. Despite this, the lessor retains legal ownership of the aircraft throughout the period. Only when the lease ends does the lessee typically gain the option to purchase the aircraft, potentially for a below-market price.

One distinction between a finance lease and an operating lease lies in what happens at the end of the agreement. Under an operating lease, the lessor keeps ownership of the aircraft and can lease it to another operator. By contrast, a finance lease effectively transfers ownership to the lessee once the term concludes, making it a path to eventual acquisition rather than a temporary rental.

"A finance lease, called a capital lease in other sectors, is structured so that substantially all of the risks and rewards associated with ownership shift to the lessee," explained Tristan Brouard, associate VP of asset management for ACC Aviation, an air charter, ACMI leasing, aircraft transaction and consultancy service provider. The lease term in finance leasing is typically long, often equivalent to a majority of the economic life of the aircraft (for example, between eight and 12 years or more). At the end of the lease, the lessee may have a purchase or transfer option at a residual price or pre-determined value. "Because lessees in finance lease structures carry much of the economic burden, these are more common when the airline has the creditworthiness, intends long-term use of the aircraft or wants eventual ownership."

Grin and bear it

There are a number of trends shaping the leasing market currently. Supply constraints and OEM backlogs are having a significant impact. The backlog at Airbus and Boeing and wider supply chain bottlenecks are pushing airlines to rely more heavily on leasing, which enables flexibility without waiting years for delivery slots. For example, an

»

RYANAIR
EI-IJJ

ABOVE: ***Ryanair is a modern rarity in terms of owning nearly all of the aircraft in its fleet*** BOEING

Southwest
N922WN

RIGHT: ***Southwest Airlines Boeing 737-7H4, N922WN (c/n 32461), was leased from BOC between 2009 and 2020, then Itochu until May 2023, when it became the property of the airline*** VINCENZO PACE

airline seeking quick access to new airframes can expect a lead time of up to a decade, versus months or just a couple of years for leased aircraft. Interest rate pressures and regulatory or accounting impacts are also a factor. Rising rates put upward pressure on lessor financing costs, influencing how aggressively lessors offer longer terms or residual guarantees.

The 2019 implementation of both IFRS 16, an accounting standard issued by the International Accounting Standards Board that sets out how companies should recognise, measure and disclose leases in their financial statements, and similar provisions under the US Generally Accepted Accounting Principles ASC 842, have affected how lessees view leasing versus financing decisions, making longer-term finance leases more comparable to on-balance-sheet debt. Under the previous rules, many leases didn't appear on the balance sheet and were treated as a kind of 'hidden' debt.

Extend or return?

Additionally, because of tight demand and scarcity of replacement aircraft, many lessors and lessees now anticipate lease extensions as a default outcome rather than a 'bolt-on' option. Brouard said lease renewals have increased: "In sum, contract lengths are stretching upward, and flexibility (in extensions, renewals and structured redeliveries) is a competitive differentiator in today's leasing environment."

The intricate nature of the lessor market extends until the very end of a leasing contract. The process of handing over or redelivering an aircraft at the end of a finance lease can be one of the most delicate and disputed parts of the process. Inspection regimes, condition thresholds and documentation obligations are intensely negotiated by both parties, and as industry practices have developed over time, expectations have become stricter.

A core element of redelivery is the aircraft's condition and maintenance status. Lessees are generally required to return the aircraft in a state that meets or exceeds the standards

BELOW: ***When Mexicana began operating the Boeing 727 in the early 1970s, the majority of the global aircraft fleet was owned outright by the airlines that operated them*** BOEING

mexicana
727-200

outlined in the lease agreement. This often includes ensuring it is within one major maintenance check – such as a C-check – has certain minimum remaining life on key components and that all scheduled maintenance is current. Where the aircraft is not at a specific maintenance milestone, leases may require 'out-of-shop' status or bridging checks to align its maintenance intervals for the next operator. Brouard noted: "Condition thresholds may include maximum allowed defects, paint condition, interior refurbishment, life-limited parts and compliance with airworthiness directives or service bulletins." Equally important are the traceability and documentation that accompany the aircraft. The lessor typically expects a complete and verifiable history of all maintenance activities, component removals and installations, overhauls and modifications. According to Brouard, a recurring source of contention is the definition of 'fair wear and tear'. Most leases acknowledge some deterioration consistent with normal operation is acceptable, but the interpretation of what constitutes 'fair' can be subjective. Ambiguous contract terms such as 'reasonable condition' are a frequent source of disputes and litigation, as noted in industry guidance from IATA and others. In some cases, lessors may agree to a cash settlement instead of requiring physical rectification, particularly for cosmetic components. Pre-return inspections, often conducted by independent specialists, help identify deficiencies early and allow time for corrective action. Any outstanding maintenance, bridging work or documentation gaps must be resolved or financially compensated before final handover.

"Outsourcing of redelivery management services is rising, as aircraft transitions across operators become more frequent," noted Brouard. "The market for 'redelivery management services' is growing, with demand for integrated co-ordination, technical oversight and logistics support. Because turnaround risk is high, lessors are increasingly using detailed checklists and pre-redelivery gap assessments many months in advance to mitigate surprises. The bottom line: clarity and precision in redelivery clauses, disciplined record-keeping and proactive defect management are essential. Lessees that neglect early-stage gap walkthroughs often face costly holdbacks or negotiations at the end."

Extension options

Renewal and extension clauses are another element of the process which need to be carefully negotiated. Most leases now include structured extension blocks – typically one to three years – exercised before expiry, often conditional on maintenance and performance standards. A reset of the rental rate is often linked to market benchmarks or index formulas, enabling lessors to cash »

ABOVE: *Wizz Air leases the majority of its aircraft* WIZZ AIR

BELOW: *When returning an aircraft at the end of its lease, inspection regimes, condition thresholds and documentation obligations are intensely negotiated by both parties* AFI KLM E&M

"At its simplest, leasing allows an airline to use an aircraft without committing to a full purchase upfront"

ABOVE LEFT: ***Leasing is generally a faster route to new aircraft than purchasing and helps keep the wheels of aviation tuning*** FRANKFURT AIRPORT

ABOVE RIGHT: ***Leasing titan Steven Udvar-Házy has been chair of both Air Lease Corporation and International Lease Finance Corporation, two of the largest aircraft lessors in the world*** ANDREAS SPAETH

"The process of handing over or redelivering an aircraft at the end of a finance lease can be one of the most delicate and disputed parts of the process"

in as leasing demand strengthens. Some leases require notice of 12–18 months in advance or payment of a fee. On the other hand, some structures will allow a lessor to compel a lease extension if market conditions are weak. With spare capacity tight and new aircraft in short supply, many operators prefer to extend rather than return or re-lease. This is lifting average remaining lease terms to around six to eight years. For lessors, resetting extension rent offers the chance to increase income and help with greater portfolio stability. Post-COVID-19, the lessor community has emerged with a stronger market share than ever before, according to Niamh Tobin, aviation finance sector leader at EY: "This trend is expected not only to continue but to accelerate, with projections suggesting that 65% of new aircraft deliveries will be financed by leasing companies. The takeaway message is clear: the current favourable market conditions for aircraft leasing are likely to persist, bolstering the aviation leasing sector."

Narrowbody lease rates have rebounded strongly since the pandemic. Engine lease rates have risen by around 20–30% for narrowbodies and 15–20% for widebodies in comparison to 2019 levels, reflecting a mixture of strong demand, maintenance constraints and the longevity of older-generation aircraft. However, leasing – much like the entire aviation sector – is inherently cyclical and is exposed to macro cycles, airline demand shocks, fuel price volatility and regulatory shifts. In this context, leases can in effect act as a means of risk-sharing during industry downturns. Brouard concluded: "Roughly 50–55% of the global commercial aircraft fleet is under lease, a figure that underscores how deeply leasing is embedded in airline fleet strategies.

Looking forward, expect finance leasing to grow selectively in markets and cases where credit, residual confidence and accounting alignment converge. However, the dominant volume will likely continue in operating and hybrid (SLB) forms, especially given the flexibility they afford in volatile markets."

BELOW: ***Widebody engine lease rates have risen by around 15–20% in comparison to 2019 levels*** AIRBUS/ SYLVAIN RAMADIER

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The latest commercial aircraft deliveries from manufacturers and lessors

SalamAir took delivery of Airbus A321neo A4O-OXI (c/n 12640) on August 29. This is the ninth example accepted by the airline since June 2021
AIRTEAMIMAGES.COM/MATHIAS DUEBER

SalamAir [OV/OMS 'Mazoon']

A4O-OXI	A321-253nx	12640	ex D-AZAO, ff 20.08.25, dd 29.08.25, lsd fr SMBC Aviation Capital, named 'Barr al Hikman'

Emirates [EK/UAE 'Emirates']

A6-EFZ	B777-F	68621	ex N20112, ff 03.07.25, dd 08.08.25
A6-EXI	A350-941	696	ex F-WZNY, ff 13.06.25, dd 22.08.25

Etihad Airways [EY/ETD 'Etihad']

A6-LRB	A321-251nx	12592	ex D-AVYX, ff 13.08.25, dd 28.08.25, lsd fr AerCap
A6-XWI	A350-1041	736	ex F-WWBW, ff 05.08.25, dd 30.08.25

flydubai [FZ/FDB 'Sky Dubai']

A6-FQJ	B737-8	61033	ex N40220, N4022T, ff 03.07.25, dd 08.08.25
A6-FQL	B737-8	61021	ex N6067E, N4022S, N4022T, ff 15.07.25, dd 21.08.25

Qatar Airways [QR/QTR 'Qatari']

A7-AOE	A350-1041	733	ex F-WZGD, ff 12.07.25, dd 13.08.25

Air Changan [9H/CGN 'Chang An']

B-5581	B737-84P	38143	ex N1786B, dd 17.09.25

Air China [CA/CCA 'Air China']

B-20DH	B737-8	60922	ex N1781B, N1786B, ff 06.10.19, dd 29.08.25
B-20DS	B737-8	60926	ex N1786B, ff 07.04.21, dd 27.08.25
B-32LE	A321-252nx	12560	ex D-AVXM, ff 31.07.25, dd 19.08.25
B-32M1	A319-153n	12613	ex D-AVWJ, ff 04.08.25, dd 22.08.25
B-225P	B737-8	60938	ex N248BE, N4022T, ff 04.03.22, dd 03.08.25

Capital Airlines [JD/CBJ 'Capital Jet']

B-32MG	A330-243(F)	797	ex 9H-AJP, dd 12.09.25 Châteauroux – Beijing PEK, op for Jiangxi Cargo Airlines

China Eastern Airlines [MU/CES 'China Eastern']

B-32MZ	A321-251nx	12629	ex F-WWSP, ff 24.07.25, dd 13.07.25
B-658T	ARJ21-700	10164	ex B-099Q, ff 27.12.24, dd 31.08.25, entered service 05.09.25

China Express Airlines [G5/HXA 'China Express']

B-659P	ARJ21-700	10184	ex B-099E, ff 14.07.25, dd 04.09.25

China Flying Dragon Aviation [CFA 'Feilong']

B-3328	ARJ21-700	111	ex B-001V, dd 09.09.25, lsd fr Henan Aviation Investment Leasing

China Southern Airlines [CZ/CSN 'China Southern']

B-32M6	A321-251nx	12603	ex D-AVYF, ff 30.07.25, dd 15.08.25, lsd fr CDB Leasing
B-32M7	A321-251nx	12564	ex D-AVZE, ff 31.07.25, dd 21.07.25, lsd fr CDB Leasing
B-32N2	A320-251n	12773	ex B-000P, ff 31.07.25, dd 14.08.25
B-32N6	A320-251n	12789	ex B-000Q, ff 18.08.25, dd 29.08.25
B-226K	B737-8	63291	ex N244BE, N5515X, N1784B, N233BE, N1786B, ff 12.02.20, dd 09.08.25
B-226L	B737-8	65257	ex N5515R, N1800B, N1799B, ff 11.11.19, dd 15.08.25
B-227L	B787-9	67813	ff 22.07.25, dd 29.08.25
B-658X	C919-100STD	28	ex B-002W, ff 24.07.25, dd 29.08.25 & parked

Hainan Airlines [HU/CHH 'Hainan Air']

B-32MT	A321-251nx	12637	ex D-AXXJ, ff 24.07.25, dd 14.08.25, lsd fr CMB Financial Leasing

Shanghai Airlines [FM/CSH 'Shanghai Air']

B-220G	B787-9	63718	ff 06.03.21, dd 29.08.25 to China Eastern Airlines
B-226G	B737-8	61661	ex N57001, N5515X, N4022L, N4022T, ff 15.12.21, dd 01.08.25 to China Eastern Airlines

Sichuan Airlines [3U/CSC 'Sichuan']

B-1016	A319-133	7880	ex B-000H, dd 23.09.25 Chongqing – Chengdu TFU, lsd fr ABC Financial Leasing

West Air [PN/CHB 'West China']

B-32MF	A319-153n	12630	ex D-AVWO, ff 31.07.25, dd 14.08.25

Air Macau [NX/AMU 'Air Macau']

B-MBU	A321-271nx	12704	ex D-AVYI, ff 20.08.25, dd 29.08.25, lsd fr AerCap, named 'Kiang hoi (鏡海號)'

EVA Air [BR/EVA 'Eva']

B-17889	B787-9	63527	ff 18.07.25, dd 28.08.25

Air Canada [AC/ACA 'Air Canada']

C-FHMO	A220-300	55382	ff 14.08.25, dd 29.08.25, ferried Montreal YMX – Toronto 10.09.25

Cargojet Airways [W8/CJT 'Cargojet']

C-GOCJ	B767-316ER(F)	29227	ret fr 21Air lse

WestJet [WS/WJA 'Westjet']

C-GKWJ	B737-8	60558	ex N40221, N4022T, ff 02.07.25, dd 01.08.25 & reg'd 31.07.25, lsd fr Aircastle, fleet # '335'
C-GSWJ	B737-8	60557	ex N5573K, N4022T, ff 29.07.25, dd 29.08.25 & reg'd 02.09.25, lsd fr Aircastle

LATAM Airlines Chile [LA/LAN 'Lan']

CC-BHK	A320-271n	12714	ex F-WWTZ, ff 01.08.25, dd 29.08.25, lsd fr China Aircraft Leasing Group & reg'd same day to CALC Yongchang Ltd
CC-BHP	A320-271n	8922	ex EI-HPI, reg'd 10.09.25 to Wilmington Trust SP Services (Dublin) Ltd, lsd fr SMBC Aviation Capital, ferried Istanbul SAW – São Carlos as EI-HPI 01-03.09.25

Royal Air Maroc [AT/RAM 'Royalair Maroc']

CN-RHF	B737-8	43352	ex N4022T, ff 11.07.25, dd 29.08.25, lsd fr Air Lease Corp
CN-RHI	B737-8	62878	ex A7-BSG, dd 25.09.25 Doha DIA – Casablanca

TAP Air Portugal [TP/TAP 'Air Portugal']

CS-TJS	A321-251nx	12710	ex D-AXXY, ff 12.08.25, dd 29.08.25

German Airways [ZQ/GER [German Eagle']

D-AWSI	ERJ190-100LR	19000074	ret fr KLM Cityhopper lease & ferried Amsterdam – Cologne 08.09.25

Lufthansa [LH/DLH 'Lufthansa']

D-ABPF	B787-9	66817	ex N8572C, ff 25.06.24, dd 29.08.25, named 'Frankfurt am Main'

Cabo Verde Airlines [VR/TCV 'Caboverde']

D4-CCM	ATR 72-212A (600)	1512	ex 2-TIYM, dd 05.09.25 Francazal – Praia, lsd fr TrueNoord, op for CVsky
D4-CCN	ATR 72-212A (600)	1514	ex 2-TIYN, dd 15.09.25 Francazal – Praia, lsd fr TrueNoord, op for CVsky
EC-MXM	B737-800	60591	ex N1786B, dd 11.09.25

Air Europa [UX/AEA 'Europa']

EC-OPA	B737-8	43571	ex N4022H, N4022T, ff 14.07.25, dd 08.08.258

World2Fly [2W/WFL 'Blue World']

EC-NZF	A330-941	613	ret fr Corendon Dutch Airlines lease & ferried Amsterdam – Cayo Coco 11.09.25

CityJet [WX/BCY 'City Ireland']

EI-HSF	CRJ.900LR	15089	ex OE-IID, dd 24.09.25 Maastricht – Copenhagen, lsd to/op for SAS

Ryanair [FR/RYR 'Ryanair']

EI-IKR	B737-8200	62394	ex N4021F, N4022T, ff 29.07.25, dd 25.08.25 & reg'd same day
EI-IKS	B737-8200	67118	ex N40215, N4022T, ff 17.07.25, dd 11.08.25 & reg'd same day
EI-IKT	B737-8200	62392	ex N4022T, ff 04.08.25, dd 18.08.25 & reg'd same day
EI-IKW	B737-8200	62391	ex N4022T, ff 25.07.25, dd 11.08.25 & reg'd same day
EI-ILD	B737-8200	60763	ex N4022T, ff 30.07.25, dd 13.08.25 & reg'd same day
EI-ILF	B737-8200	67067	ex N4022S, N4022T, ff 26.07.25, dd 22.08.25 & reg'd same day

AVA Airlines [AXV 'Ava']

EP-AXE	B737-529	25249	ex 7Q-YAU, dd 09.25, had ferried Johannesburg – Iran as 7Q-YAU 22-23.07.25 after storage since 15.07.21

Key to Abbreviations

a/c	aircraft
als	airlines
awys	airways
bf	bought from
b/u	broken up/scrapped
canx	cancelled
cls	colours
cn	manufacturer's construction/serial number
cnvrtd	converted
dbf	destroyed by fire
dbr	damaged beyond repair
dd	delivery date
ex	previous reg'n
ff	first flight
frtr	freighter
lrf	last revenue flight
lsd fr	leased from
lsd to	leased to
msn	see cn
ntu	not taken up
oo	on order
op	operated
pax	passenger
pwfu	permanently withdrawn from use
reg'd	registered
reg'n	registration
ret fr	returned from
ret to	returned to
rr	re-registered
rts	return to service
sb	sold by
scr	scrapped/broken up
st	sold to
std	stored
tba	to be advised
unk	unknown
wfu	withdrawn from use
w/o	written off/destroyed

EP-RBB	B737-505	27155	ex VP-BKV, dd 07.09.25, was std Tehran since 21.09.20

Lad Airways

EP-LAD	DC-9 82	49506	ex EP-CBC, dd 02.09.25, lsd to Taban Airlines

Taban Airlines [HH/TBN 'Taban']

EP-LAD	DC-9 82	49506	ex EP-CBC, dd 02.09.25, lsd fr Lad Airways

Ethiopian Airlines [ET/ETH 'Ethiopian']

ET-AVP	B737-752	33787	ret fr Malawian Airlines lease, ferried Addis Ababa – Francazal 19.09.25 for storage/work
ET-BAM	B737-8	64161	ex N40221, N4022T, ff 14.07.25, dd 21.08.25
ET-BAZ	A350-1041	723	ex F-WZHF, ff 18.07.25, dd 01.08.25
ET-BCF	B737-7K5	30726	ex 9XR-WK, dd 12.09.25 Shannon – Addis Ababa, leased to Malawian Airlines

Asman Airlines [KGN 'Manas Bird']

EX-21003	DHC-8 402	4452	ex N450QX, dd 10.09.25, continued Dresden - Bishkek as N450QX 01-02.09.25 on delivery, adds to last months section & reg'n canx 10.09.25

Air Corsica [XK/CCM 'Corsica']

F-HDSJ	A319-112	3727	ex OE-IRC, dd 22.09.25 & entered service same day, lsd fr/op by Amelia International

Air France [AF/AFR 'Air France']

F-HPNU	A220-300	55375	ex C-FOVX, ff 18.07.25, dd 18.08.25 & reg'd 19.08.25, named 'Vaison-la-Romaine', ferried Montreal YMX – Paris CDG 25.08.25

Transavia France [TO/TVF 'French Soleil']

F-HXST	A320-252n	12687	ex F-WWIK, ff 15.07.25, dd 29.08.25 & reg'd 02.09.25 to SMBC Aviation Capital

Ascend Airways [YD/SYG 'Synergy']

G-ULIT	B737-8	43001	ret fr Air Algérie lease & ferried Algiers – Norwich 22.09.25

BA Euroflyer [A0/EFW 'Grffin']

G-EUUW	A320-232	3499	ex F-WWIN, dd 27.09.25

Emerald Airlines UK [EAG 'Greenstone']

G-CMFL	ATR 72-212A (600)	1339	ex EI-FSL, reg'd 03.09.25, lsd fr DAE Capital

One Air [HC/HGO 'Hampton']

G-ONEG	B777-F	68454	ff 01.08.25, dd 25.08.25 to AeroTransCargo FZE & reg'd 25.08.25

Wizz Air [W6/WZZ 'Wizz Air']

HA-LGX	A321-271nx	9429	ex A6-WZB, dd 09.25, lsd fr BOC Aviation, entered service 19.09.25

Edelweiss Air [WK/EDW 'Edelweiss']

HB-IHB	A350-941	45	ex OE-LHE, reg'd 21.09.25 to Deutsche Lufthansa AG, ferried Teruel – Zürich 23.09.25 on delivery, named 'Melchsee-Frutt'

Wingo [P5/RPB 'Aerorepublica']

HP-1712CMP	B737-8V3	40664	dd 04.09.25

Aero-K [RF/EOK 'Aerohanguk']

HL8743	A320-214	6021	ex RP-C3278, reg'd 25.09.25

Eastar Jet [ZE/ESR 'Estar']

HL8718	B737-8	67924	ex N4022A, N4022T, ff 22.07.25, dd 21.08.25 & reg'd same day, lsd fr Phoenix Aviation Capital

Parata Air [PTA 'Parata Air']

HL8742	A320-216	3978	ex 2-IDTJ, reg'd 05.09.25 & ferried Jinan – Seoul GMP 06.09.25

T'Way Air [TW/TWB 'Tway Air']

HL8579	B737-8	62919	ff 06.08.25, dd 25.08.25 & reg'd same day, lsd fr AerCap

Copa Airlines [CM/CMP 'Copa']

HP-9807CMP	B737-8	44200	ex N4025T, N4022T, ff 08.07.25, dd 07.08.25
HP-9808CMP	B737-8	67848	ex N8571F, N4026Q, N4022T, ff 18.07.25, dd 21.08.25

Wingo Panama [WH/WPP 'Wingo Panama']

HP-1990WWP	B737-8BK(BCF)	29660	ex VP-CLQ, dd 08.25 & entred service 01.09.25, lsd fr Icelease

flynas [XY/KNE 'Nas Express']

HZ-NS94	A320-251n	12805	ex B-005J, ff 06.08.25, dd 20.08.25, ferried Tianjin – Riyadh 26-27.08.25

Aeroitalia [XZ/AEZ 'Aeroitalia']

SX-ASK	ERJ170-200STD	17000330	ret fr SkyAlps lse
9H-RFD	ATR 72-212A (600)	1196	as SX-ASK

ITA Airways [AZ/ITY 'Itarrow']

EI-HHV	A220-300	55379	ex C-FOWF, ff 05.08.25, dd 22.08.25, lsd fr Air Lease Corp & reg'd to ALC Clover Ireland Ltd 22.08.25, named 'Filippo Magnini'

Japan Airlines [JL/JAL 'Japanair']

JA17XJ	A350-941	731	ex F-WZNF, ff 18.07.25, dd 14.08.25 & reg'd 15.08.25

Peach [MM/APJ 'Air Peach']

JA219P	A320-251n	12601	ex F-WWDK, ff 08.08.25, dd 30.08.25

MIAT – Mongolian Airlines [OM/MGL 'Mongol Air']

ZS-CMZ	CRJ.702	10289	ex N582GJ, dd 08.25, lsd fr CemAir, entered service 28.08.25

Royal Jordanian [RJ/RJA 'Jordanian']

JY-RAG	A320-271n	12508	ex F-WHUS, ff 24.04.25 as F-WWIJ, rr F-WHUS, dd 26.06.25 Toulouse – Francazal & parked, ferried to Amman 08.08.25 for entry into service, named 'Mu'ta'
JY-RAI	A320-271n	12541	ex F-WWDH, ff 17.07.25, dd 13.08.25, lsd fr Avolon Aerospace, named 'Marka'
JY-RAJ	A320-271n	12618	ex F-WWDA, ff 21.07.25, dd 01.08.25, lsd fr SMBC Aviation Capital, named 'Tafila'
JY-RAL	A320-271n	12673	ex F-WWDJ, ff 28.07.25, dd 22.08.25, lsd fr SMBC Aviation Capital, named 'Zarqa'

Flybondi [FO/FBZ 'Bondi']

PR-MLD	A320-214	3601	ex 9H-MLD, dd 04.09.25 & entered service 05.09.25, lsd fr/op by Avion Express Brasil

JetSMART Argentina [WJ/JES 'Smartbird']

CC-DIH	A320-271n	11849	ex F-WWIM, dd 26.09.25 Santiago SCL – Buenos Aires EZE, lsd fr Griffin Global Asset Management

GetJet Airlines [GW/GJT 'Getjet']

LY-WIZ	A320-232	3430	ret fr Royal Jordanian lease

Electra Airways [3E/EAF

LZ-EAH	A320-214	2930	ret fr AMC Aviation lease

Fly2Sky [F6/VAW 'Sofia Jet']

LZ-FSJ	A320-233	3570	ret fr TUIfly Belgium lease

7Air Cargo [AD/TXG 'Cargo Box']

N945FL	B737-85H(BCF)	29445	ex F-GZHN, dd 19.09.25 Sanford – Miami, lsd fr FlightLease

Alaska Seaplanes

N60TF	DHC-2 Mk.I	1205	ex N62305, reg'd 22.09.25

Allegiant Air [G4/AAY 'Allegiant']

N825NV	B737-8200	68022	ex N4026T, N4022T, ff 13.07.25, dd 07.08.25 & reg'd 27.08.25, ferried Boeing Field – Goodyear 07.08.25 & parked

Aloha Air Cargo [KH/AHH 'Aloha']

N440KH	B737-490(F)	28889	ex EI-GUB, dd 07.09.25, lsd fr Automatic

American Airlines [AA/AAL 'American']

N302NY	A321-253ny	12368	ex D-AZXK, ff 17.07.25, dd 22.08.25, rr F-WXAC 25.08.25 & ferried Hamburg XFW – Ostrava 26.08.25 for seat installation
N311UN	B737-8	68194	ex N4022T, ff 16.06.25, dd 27.08.25 & reg'd 28.08.25, fleet # '3UN'
N844MC	B787-9	66009	ff 19.03.25, dd 07.08.25 & reg'd same day to Wilmington Trust Co Trustee, fleet # '8MC'
N847MF	B787-9	66012	ff 25.07.25, dd 27.08.25 & reg'd 03.09.25, fleet # '8MF'
N849AN	B787-9	66018	ff 15.08.25, dd 29.08.25 & reg'd 02.09.25, fleet # '8MH'

Breeze Airways [MX/MXY 'Moxy']

N256BZ	A220-300	55365	ex C-GIXY, ff 30.07.5, dd 19.08.25 & reg'd 20.08.25

Delta Air Lines [DL/DAL 'Delta']

N334DU	A220-300	55374	ex C-FOVH, ff 28.07.25, dd 11.08.25 & reg'd same day, fleet # '8334'
N594DA	A321-271nx	12482	ex D-AXAF, ff 28.04.25, dd 18.08.25 & reg'd same day, fleet # '5094', ferried Hamburg XFW – Amsterdam 20.08.25 & parked
N599DA	A321-271nx	12724	ex D-AVXD, ff 01.07.25, dd 20.08.25 & reg'd same day, fleet # '5099', ferried Hamburg XFW – Amsterdam 22.08.25 & parked

Eastern Air Express [BBQ 'Eastern Express']

N333RQ	ERJ170-200LR	17001007	ex PR-EKE, reg'd 23.09.25 to American Airlines, ferried São José dos Campos – Abilene 24.09.25
N334CR	ERJ170-200LR	17001008	ex PR-EKQ, reg'd 25.09.25 to American Airlines, ferried São José dos Campos – Abilene 26.09.25

FedEx Feeder

C-FWZG	Cessna 408	408-0047	reg'd 15.09.25 to Morningstar Air Express, ferried Beech Field – Edmonton 18.09.25
C-FWZM	Cessna 408	408-0049	reg'd 18.09.25 to Morningstar Air Express, ferried Wichita – Edmonton 24.09.25
N780FX	Cessna 408	408-0044	reg'd 06.09.25

GlobalX Airlines [G6/GXA 'Gemini']

N278GX	A320-214	1954	ret fr TUIfly Nederland lease
N291GX	A320-214	3349	as N278GX

jetBlue Airways [B6/JBU 'Jet Blue']

N3271J	A220-300	55369	ex C-GPNB, ff 05.08.25, dd 22.08.25 & reg'd 22.08.25, named 'A-Blue-Twenty'

Kalitta Air [K4/CKS 'Connie']

N770CK	B777-36NER(F)	32792	ex A6-EBO, dd 11.09.25, lsd fr AerCap, cnvrtd to B777-36NER(F) 09.25 at Tel Aviv, ferried to Oscoda 12-13.09.25
N771CK	B777-36NER(F)	32791	ex VQ-BZK, dd 15.09.25, lsd fr AerCap, ferried Tel Aviv – Oscoda 15-16.09.25
N779CK	B777-36NER(F)	32785	ex VQ-BZI, dd 26.09.25, lsd fr AerCap, parked Oscoda
N778CK	B777-36NER(F)	32789	ex N557CC, dd 11.09.25, lsd fr AerCap, ferried Tel Aviv – Oscoda 11-12.09.25

Republic Airline 9YX/RPA 'Brickyard']

N782YX	ERJ170-200LR	17000994	ex PR-ENH, reg'd 03.09.25, ferried São José dos Campos – Indianapolis 05.09.25, United Express colours
N785YX	ERJ170-200LR	17001000	ex PR-EKA, reg'd 10.09.25, ferried São José dos Campos – Indianapolis 12.09.25, United Express colours
N786YX	ERJ170-200LR	17001001	ex PR-EKC, reg'd 25.09.25, ferried São José dos Campos – Indianapolis 26.09.25, United Express colours

SkyWest Airlines [OO/SKW 'Skywest']

N247LR	CRJ.900LR	15273	ex C-GUHU, reg'd 25.09.25, parked Tucson

Southwest Airlines [WN/SWA 'Southwest']

N8964L	B737-8	68926	ff 12.06.25, dd 26.08.25 & reg'd same day
N8965Q	B737-8	42610	ex N4022T, ff 07.08.25, dd 28.08.25 & reg'd 02.09.25
N8966S	B737-8	42626	ff 05.08.25, dd 29.08.25 & reg'd 04.09.25

United Airlines [UA/UAL 'United']

N14541	A321-271nx	12591	ex F-WZMM, ff 06.08.25, dd 14.08.25 & reg'd 15.08.25, fleet # '4541'
N14545	A321-271nx	12633	ex F-WZMO, ff 12.08.25, dd 28.08.25, lsd fr China Aircraft Leasing Group & reg'd 04.09.25 to Wilmington Trust Co Trustee, fleet # '4545'
N17406	B737-9	68815	ff 19.06.25, dd 22.08.25 & reg'd 22.08.25 to Wilmington Trust Co Trustee, fleet # '7406'
N17407	B737-9	68816	ex N4025H, N4022T, ff 24.06.25, dd 25.08.25 & reg'd 25.08.25 to Wilmington Trust Co Trustee, fleet # '7407'
N17408	B737-9	68817	ex N4022T, ff 10.07.25, dd 26.08.25 & reg'd 27.08.25 to Wilmington Trust Co Trustee, fleet # '7408'
N17410	B737-9	68810	ex N4022T, ff 15.07.25, dd 29.08.25 & reg'd 03.09.25 to Wilmington Trust Co Trustee, fleet # '7410"

We welcome any feedback on this listing

(The listing is alphabetical with reference to the registration of the country of origin. Columns indicate the registration, type, construction number and notes.)

Airliner Deliveries

The latest commercial aircraft deliveries from manufacturers and lessors

Vietnamese low-cost carrier VietJetAir took delivery of Airbus A330-343, VN-A820 (c/n 1376), on September 13. The 13-year-old ex-Corsair widebody has been reconfigured to seat 360 passengers in a two-class layout compared to its previous three-class, 352-seat configuration
AIRTEAMIMAGES.COM/VALENTIN YVON

N17411	B737-9	68819	ex N40221, N4022T, ff 22.07.25, dd 29.08.25 & reg'd 03.09.25 to Wilmington Trust Co Trustee, fleet # '7411'
N22995	B787-9	68623	ff 31.07.25, dd 22.08.25 & reg'd 25.08.25, fleet # '0995'
N54538	A321-271nx	12561	ex F-WZME, ff 01.08.25, dd 21.08.25 & reg'd same day, fleet # '4538'
N54543	A321-271nx	12634	ex F-WZMP, ff 18.08.25, dd 26.08.25 & reg'd 27.08.25, fleet # '4543'
N57409	B737-9	68818	ex N4022T, ff 12.07.25, dd 27.08.25 & reg'd 03.09.25 to Wilmington Trust Co Trustee, fleet # '7409'

Austrian Airlines [OS/AUA 'Austrian']

SE-MKF	ATR 72-212A (600)	1357	ex F-WWER, dd 06.09.25 & entered service 07.09.25, lsd fr/op by Braathens Regional Airways

Tyrolean Jet Services [TJS 'Tyrojet']

OE-LAP	Emb-145EP	145118	ex S5-APB, dd 12.09.25

AirExplore [AD/AXE 'Galileo']

OM-PEX	B737-8HX	29677	ex F-GZHF, dd 19.09.25 Montpellier – Bratislava, lsd fr Aviation Capital Group

Corendon Dutch Airlines [CD/CND 'Dutch Corendon']

EC-NTB	A330-941	559	ex F-WZFR, dd 13.09.25 & entered service same day, lsd fr/op by World2Fly

KLM Cityhopper [WA/KLC 'City']

PH-NXX	ERJ190-400	19020197	ex PR-EKY, dd 19.09.25 & reg'd 20.09.25, fleet # 'NXX-197', ferried São José dos Campos – Amsterdam 20-21.09.25
PH-NXZ	ERJ190-400	19020198	ex PR-ERD, dd 26.09.25 & reg'd 26.09.25, fleet # 'NXZ-198', ferried São José dos Campos – Amsterdam 26-27.09.25

KLM Royal Dutch Airlines K/KLM 'Klm']

PH-AXK	A321-252nx	12664	ex D-AXXR, f 07.08.25, dd 21.08.25 & reg'd same day, named 'Boomblauwtje / Holly Blue'
PH-BKQ	B787-10	42505	ff 23.07.25, dd 15.08.25 & reg'd same day, fleet # 'KQ-062, named Vergeet-mij-nietje / Forget-me-not'

Transavia [HV/TRA 'Transavia']

LY-NVH	A321-231	2653	ex VP-CBX, dd 03.09.25 Castellón de la Plana – Brussels, lsd fr/op by Avion Express
PH-YHE	A321-252nx	12702	ex D-AXXU, ff 25.07.25, dd 14.08.25 & reg'd same day

Winair [WM/WIA 'Windward']

PJ-WIY	ATR 42-500	649	ex HK-5199, dd 05.09.25, lsd fr Abelo

Rimbun Air [RI/OEY Rimbun Air']

PK-OTT	DHC-6 400	951	ex VT-KHU, dd 10.09.25, lsd fr AER Leasing

Azul Linhas Aéreas [AD/AZU 'Azul']

PS-KSB	ERJ190-400	19020172	ex PR-EKZ, PR-EIU, dd 10.09.25

LATAM Airlines Brasil [JJ/TAM 'Tam']

PS-LHE	A320-271n	8877	reg'd 25.08.25 to Jackson Square Aviation Ireland Ltd

Red Wings [WZ/RWZ 'Air Red']

RA-64549	Tu.214	42507013	ex RA-64513, dd 05.09.25, lsd fr IFC

LaneXang [LXW 'Lanexang']

RDPL-34166	ATR 72-212A (500)	899	ex XU-235, dd 23.09.25 Vientiane – Kuala Lumpur SZB

Sunlight Air [2R/RLB 'Sunlight']

RP-C6388	ATR 72-212A (600)	1116	ex N1116J, dd 20.09.25, lsd fr Jetstream Aviation Capital, seen Exeter 10.09.25 prior to lease, (N1116J canx 20.09.25)

SAS Link [SVS 'Discover']

SE-RSZ	ERJ190-200LR	19000727	ex B-3238, dd 04.08.25, ferried Exeter – Copenhagen 05.09.25 for entry into service, named 'Varin Viking'

SAS Scandinavian Airlines [SK/SAS 'Scandinavian']

EI-HSF	CRJ.900LR	15089	ex OE-IID, dd 24.09.25 & entered service 25.09.25, lsd fr/op buy Cityjet
SE-RZB	A320-251n	12645	ex F-WWBO, ff 23.07.25, dd 07.08.25, lsd fr Macquaire AirFinance & reg'd to UMB Bank NA same day

AMC Aviation [AM 'Amex']

LZ-EAL	A320-214	1473	ex EI-IKF, dd 29.08.25 Varna – Katowice & entered service same day, lsd fr/op by Electra Airways

Buzz [RR/RYS 'Magic Sun']

SP-RZR	B737-8200	62390	ex N40220, N4022T, ff 15.07.25, dd 07.08.25 to Ryanair

LOT Polish Airlines [LO/LOT 'Pollot']

YR-HLD	B737-8CX	32360	ex OK-TVO, dd 21.09.25 & entered service 22.09.25, lsd fr/op by Hellojets

Air Cairo [SM/MSC 'Air Cairo']

SU-BWD	A320-214	6458	ex EI-HNW, dd 16.09.25 Prague – Cairo, lsd fr Macquarie AirFinance

AJet [VF/TKJ 'Anatolia']

TC-OHA	B737-8	65213	ex N4022A, N4022T, ff 26.06.25, dd 07.08.25 to Turkish Airlines, lsd fr CDB Aviation
TC-OHD	B737-8	66414	ex N40220, N4022T, ff 27.07.25, dd 22.08.25 to Turkish Airlines, lsd fr CDB Aviation
YL-LDY	A321-231	3522	ex LY-BLX, dd 15.09.25 & entered service 16.09.25, lsd fr/op by SmartLynx

Corendon Airlines [XC/CAI 'Corendon']

OM-IEX	B737-8BK	33016	ex D-APBC, dd 22.09.25 Bratislava – Antalya & entered service 24.09.25, lsd fr/op by AirExplore

Pegasus Airlines [PC/PGT 'Sunturk']

TC-RFR	A321-251nx	12598	ex D-AVZJ, ff 15.07.25, dd 01.08.25, named 'Inci'
TC-RFT	A321-251nx	12619	ex F-WWSO, ff 25.07.25, dd 28.08.25, named 'Lavinya Zeynep'

SunExpress [XQ/SXS 'Sun Express']

LY-NVI	A320-232	3004	ex VP-CCL, dd 25.09.25 & entered service same day, lsd fr/op by Avion Express
TC-SRF	B737-81M	44421	ex A4O-BQ, dd 12.09.25 Istanbul ISL – Antalya, lsd fr AviLease
9H-GKJ	A320-232	7163	ex VT-TTL, dd 23.09.25 & entered service 24.09.25, lsd fr op/by Avion Express Malta

Turkish Airlines [TH/THY 'Turkish']

TC-LPS	A321-271nx	12775	ex D-AZAZ, ff 05.08.25, dd 22.08.25, lsd fr BoComm Leasing

Camair-Co [QC/CRC 'Camairco']

OK-TVJ	B737-8Q8	29351	ex C-FFVJ, dd 05.09.25 & entered service same day, lsd fr/op by SmartWings

Tunisair [TU/TUN 'Tunisair']

YR-LRE	A340-313	938	ex 9H-HOP, dd 16.09.25 & entered service same day, lsd fr/op by Legend Airlines

Tunisair Express [UG/TUX 'Tunexpress']

UR-WRY	A319-112	1745	ex LY-FAA, dd 15.09.25 & entered service 16.09.25, lsd fr/op by Windrose Als

Centrum Air [C6/MFX 'Whitebird']

UK33031	A330-343E	1086	ex VP-CRV, dd 06.09.25 Bangkok DMK – Tashkent, lsd fr Aergo Capital, op by My Freighter

FlyArystan [FS/AYN 'Arystan']

EI-KFI	A320-271n	12684	ex F-WWBX, ff 31.07.25, dd 22.08.25, lsd fr Avolon Aerospace & reg'd same day to Avolon Leasing Ireland Ltd

Jetstar Ariways [JQ/JST 'Jetstar']

VH-X3B	A320-232	4772	ex 9V-JSK, reg'd 19.09.25 to Qantas Airways Ltd
VH-X3J	A320-232	5433	ex 9V-JSR, reg'd 26.09.25 to UMB Bank NA, lsd fr Macquarie AirFinance
VH-X3N	A320-232	5813	ex 9V-JSV, reg'd 09.09.25 to Qantas Airways, entered service 20.09.25
VH-VQF	A320-232	3474	ex F-WWDE, reg'd 24.09.25, lsd fr Qantas, named 'Mondurup Bell'

Qantas Airways [QF/QFA 'Qantas']

VH-OGB	A321-271ny	12427	ex D-AZYY, ff 17.07.25, dd 21.08.25, named 'Outback Way'
VH-84P	DHC-8 402	4488	ex C-GWEG, reg'd 10.09.25 to Qantas Airways, ferried Sault Ste. Marie – Brisbane as C-GWEG 29.08-02.09.25 & reg'n canx 09.09.25

Key to Abbreviations

a/c	aircraft
als	airlines
awys	airways
bf	bought from
b/u	broken up/scrapped
canx	cancelled
cls	colours
cn	manufacturer's construction/serial number
cnvrtd	converted
dbf	destroyed by fire
dbr	damaged beyond repair
dd	delivery date
ex	previous reg'n
ff	first flight
frtr	freighter
lrf	last revenue flight
lsd fr	leased from
lsd to	leased to
msn	see cn
ntu	not taken up
oo	on order
op	operated
pax	passenger
pwfu	permanently withdrawn from use
reg'd	registered
reg'n	registration
ret fr	returned from
ret to	returned to
rr	re-registered
rts	return to service
sb	sold by
scr	scrapped/broken up
st	sold to
std	stored
tba	to be advised
unk	unknown
wfu	withdrawn from use
w/o	written off/destroyed

Virgin Australia Airlines [VA/VOZ ‘Kanga’]

VH-8IK	B737-8	65116	ex N4022T, ff 23.07.23, dd 13.08.25, lsd fr Aviation Capital Group, named ‘Hutt Lagoon’
VH-8VA	B737-8	67034	ex N4022T, ff 26.08.25, dd 19.08.25, lsd fr Avalon Aerospace, named ‘Port Stephens’

Virgin Australia Regional Airlines [XR/VRA ‘Rapid’]

VH-E2A	ERJ190-300	19020185	ex PR-ELZ, dd 03.09.25, lsd fr Azorra Aviation, named ‘Coral Bay’, ferried São José dos Campos – Canberra 03-06.09.25

Vietjet Air [VJ/VJC ‘Vietjet Air’]

VN-A820	A330-343E	1376	ex F-HZEN, dd 13.09.25, lsd fr Maverick Aviation Ventures

InterCaribbean Airways [JY/IWY ‘Islandways’]

VQ-TNS	ERJ170-100LR	17000269	ex SU-GDG, dd 17.09.25, ferried Cairo – Saltillo 17-18.09.25 after storage since 22.12.19 for work prior to entry into service

IndiGo [6E/IGO ‘Ifly’]

LN-LNR	B787-9	38784	ex EC-NVY, dd 16.09.25, ferried Delhi – Mumbai 19.09.25 & entered service 20.09.25, lsd fr/op by Norse Atlantic Airways
VT-NCS	A321-251nx	12546	ex F-WWSE, ff 18.07.25, dd 25.08.25
VT-NCT	A321-251nx	12609	ex F-WWSF, ff 11.07.25, dd 13.08.25
VT-NCU	A321-251nx	12623	ex D-AXXG, ff 06.08.25, dd 28.08.25
VT-NCX	A321-251nx	12616	ex D-AXXA, ff 01.08.25, dd 21.08.25
YL-LDN	A320-A232	3641	ex OE-IFQ, dd 15.09.25, ferried Riga – Delhi 15-16.09.25 & entered service 23.09.25, lsd fr/op by SmartLynx
YL-LDX	A320-214	3221	ex 2-MREF, dd 03.09.25 Sharjah – Delhi & entered service 08.09.25, lsd fr/op by SmartLynx

Tropic Air [9N/TOS ‘Tropiser’]

V3-HJB	Cessna 208B/EX	208B5…	dd 12.09.25
V3-HJC	Cessna 208B/EX	208B5…	dd 12.09.25
V3-HJD	Cessna 208B/EX	208B5…	dd 12.09.25

Aeroméxico [AM/AMX ‘Aeromexico’]

XA-AMP	B737-8	43623	ex N4021F, N4022T, ff 18.07.25, dd 15.08.25, lsd fr AerCap

Viva Aerobus [VB/VIV ‘Viva’]

XA-VDP	A320-232	5662	ex LZ-DDD, dd 09.25, lsd fr DAE Capital, entered service 12.09.25, painted in special ‘Juan Gabriel’ colours

SmartLynx [6Y/ART ‘Smart Lynx’]

YL-LDU	A320-232	6306	ret fr Royal Air Maroc lease

Air Zimbabwe [UM/AZW ‘Air Zimbabwe’]

5Y-RNV	ATR 42-500	637	ex 2-HAIB, dd 05.09.25, lsd fr/op by Renegade Air

Airlink [4Z/LNK ‘Link’]

ZS-ARF	ERJ190-400	19020190	ex PR-EFL, dd 22.09.25, lsd fr Azorra Aviation, ferried São José dos Campos – Johannesburg 22-23.09.25

South African Airways [SA/SAA ‘Springbok’]

9H-HFA	A330-343E	1779	ex 2-HHLL, dd 12.09.25 Jakarta CGK – Johannesburg & entered service 16.09.25, lsd fr/op by Hi Fly Malta

Silk Way West Airlines [7L/AZG ‘Silk West’]

VP-BAA	B777-F	70301	ff 10.08.25, dd 29.08.25

Arkia – Israel Airlines [IZ/AIZ ‘Arkia’]

LZ-EAI	A320-232	1862	ex EC-LRY, dd 11.09.25 Varna – Tel Aviv & entered service same day, lsd fr/op by Electra Airways

Israir Airlines [6H/ISR ‘Israir’]

OK-IOO	A320-214	3762	ex C-GEXI, dd 07.09.25 & entered service 08.09.25, lsd fr/op by SmartWings
YR-RAM	A320-232	3782	ex VT-INX, dd 14.08.25 & entered service same day, lsd fr/op by Hellojets

Renegade Air [RNG ‘Renegade’]

5Y-	ATR 42-320(F)	378	ex HB-AMC, dd 11.09.25
5Y-	ATR 42-320(F)	317	ex HB-AMB, dd 11.09.25

Air Sénégal [HC/SZN ‘Sensa’]

LY-MAL	A320-214	3068	ex 9H-AEQ, dd 19.09.25 & entered service 20.09.25, lsd fr/op by GetJet Als

Dakar Air Cargo

ES-NTC	ATR 72-212A (500(F))	541	ex OY-YBU, dd 22.08.25, lsd fr NyxAir

Malawian Airlines [3W/MWI ‘Malawian’]

ET-BCF	B737-7K5	30726	ex 9XR-WK, dd 16.09.25 Addis Ababa – Lilongwe, lsd fr Ethiopian Airlines

Air Algérie [AH/DAH ‘Air Algerie’]

G-NOLA	B737-8	43302	ex 9H-LYR, dd 18.09.25 & entered service 22.09.25, lsd fr/op by Ascend Awys

Croatia Airlines [OU/CTN ‘Croatia Airlines’]

9A-CAP	A220-300	55380	ex C-FOWQ, ff 20.08.25, dd 29.08.25, lsd fr Air Lease Corp, named ‘Zadar’

Fly2Sky Malta [FTS]

9H-FSM	A320-233	3378	ex LZ-MDI, dd 06.09.25, lsd fr Aerovista, ferried Bucharest OTP – Sofia 22.09.25 for work prior to entry into service

Hi Fly Malta [3L/HFM ‘Moonraker’]

9H-ALC	A330-202	1283	ret fr TAP Air Portugal lease & ferried Lisbon – Rome FCO 01.09.25
9H-HFI	A330-302	805	ret fr Air Algérie lease & ferried Paris CDG – Beja 14.09.25
9H-HFK	A330-223	874	ret fr Air Austral lease
9H-MFS	A330-202	700	ret fr Jet2.com lease

SkyUp Europe [U5/SEU ‘Sky Malta’]

LY-MAU	A320-214	6347	ex A7-LAA, dd 20.09.25 & entered service same day, lsd fr/op by Heston Als
LY-MLN	A320-232	3741	ex OE-LIB, dd 16.09.25 & entered service 21.09.25, lsd fr/op by Avion Express
9H-SAT	B737-8Q8	29368	ret fr Air Algérie lease

SmartLynx Malta [2N/LYX ‘Malta Cat’]

9H-CHI	B737-8	60459	ret fr AJet lease & ferried Istanbul SAW – Riga 16.09.25

Wizz Air Malta [W4/WMT ‘Wizz Malta’]

9H-WBF	A321-271nx	10371	ex A6-WZC, dd 12.09.25 lsd fr BOC Aviation
9H-WMF	A321-271nx	12662	ex D-AZAW, ff 14.07.25, dd 11.08.25 to Wizz Air
9H-WMI	A321-271nx	12722	ex B-005F, ff 11.07.25, dd 06.08.25 to Wizz Air
9H-WMJ	A321-271nx	12756	ex D-AVYV, ff 23.08.25, dd 28.05.25 to Wizz Air, lsd fr Aviation Capital Group

Kuwait Airways [KU/KAC ‘Kuwaiti’]

9H-AQC	A321-251nx	12682	ex D-AVZL, ff 01.08.25, dd 28.08.25, named ‘Abdali’

Ascend Airways Malaysia [AXN ‘Astra’]

9M-ASC	B737-8AS(F)	33813	ex OM-EDI, dd 09.25, lsd fr Tokyo Century Corp

Batik Air Malaysia [OD/MXD ‘Malindo’]

9M-LRK	B737-8	43005	ret fr flynas lse & ferrried Jeddah – Batam 09-10.09.25
9M-LRP	B737-8	43014	ret fr flynas lse & ferried Jeddah – Kuala Lumpur KUL 11.09.25

Malaysia Airlines [MH/MAS ‘Malaysian’]

9M-MNJ	A330-941	2092	ex F-WWCY, ff 11.07.25, dd 01.08.25
9M-MNL	A330-941	2099	ex F-WWYC, ff 08.08.25, dd 29.08.25

flyCAA [BU/DBP ‘Africompany’]

9S-PEB	A321-211(F)	808	ex N986CM, dd 04.09.25, lsd fr Cargo Aircraft Management, ferried Tampa – Kinshasa 26-27.09.25, (N986CM canx 04.09.25)

Scoot [TR/TGW ‘Scooter’]

9V-TNI	A320-271n	12697	ex F-WWBM, ff 25.07.25, dd 08.08.25, named ‘Golden Horizons’

Singapore Airlines [SV/SIA ‘Singapore’]’

9V-MBS	B737-8	44261	ex N4022L, N4022T, ff 24.07.25, dd 27.08.25

We welcome any feedback on this listing

(The listing is alphabetical with reference to the registration of the country of origin. Columns indicate the registration, type, construction number and notes.)

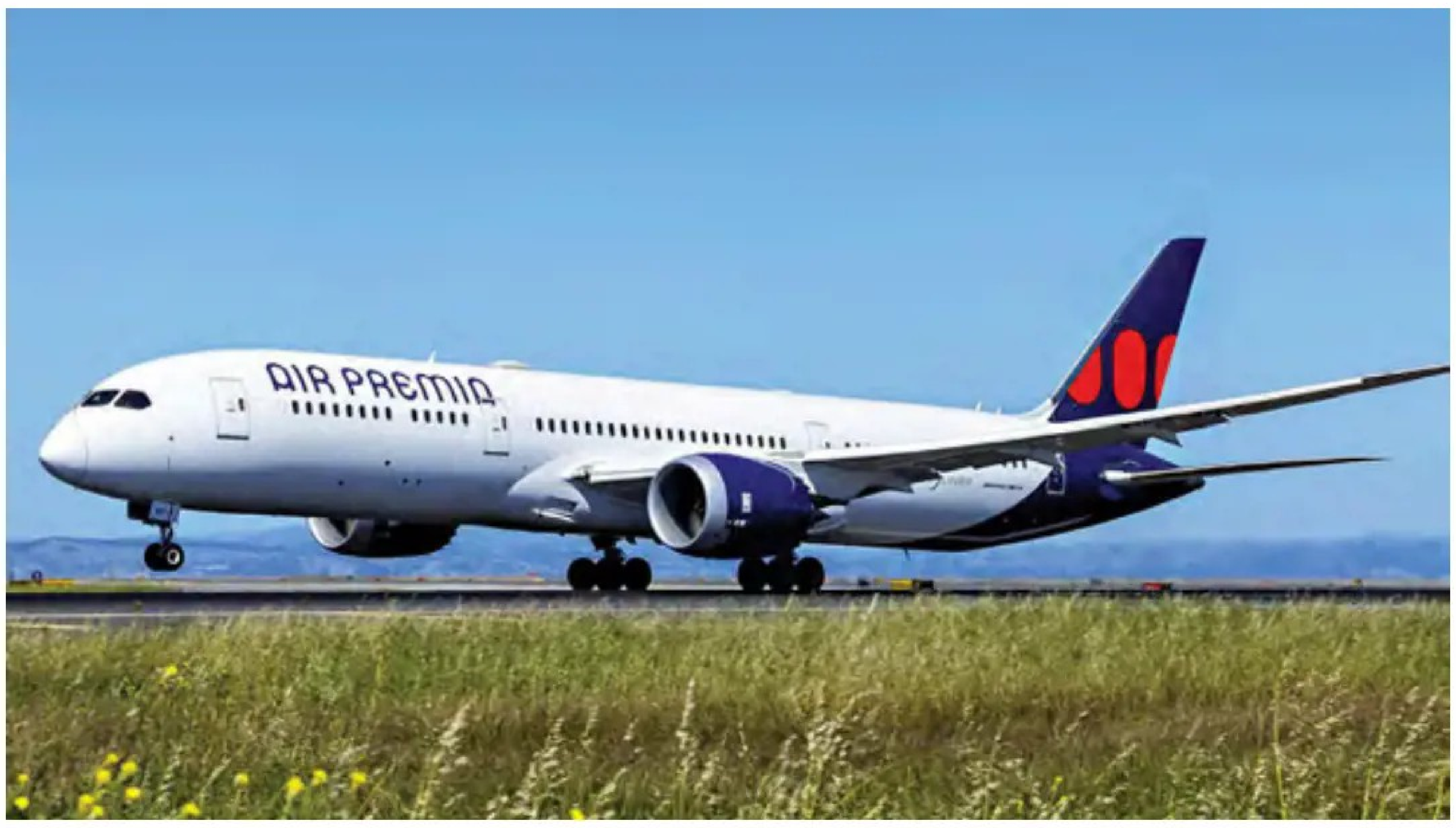
IndiGo
DREAMLINER
goIndiGo.in

IndiGo’s third Boeing 787-9 Dreamliner – a type key to the airline’s recent long-haul expansion – arrived on September 16. On damp lease from Norse Atlantic Airways, LN-LNR (c/n 38784) first flew as G-CKNA in August 2017 with Norwegian Air UK
AIRTEAMIMAGES.COM/SIMON WILLSON

The latest news from maintenance, repair and overhaul providers

By Nigel Pittaway

New deals at Lufthansa Technik



MRO giant Lufthansa Technik has reached agreement with Air Europa to cover total component support (TCS) for the Spanish carrier's entire fleet of Boeing 737s. The contract expands on an existing deal between the two companies and includes it's two 737 MAX aircraft, as well as all future deliveries. The airline currently operates 26 737-800s in addition to the two MAX variants, and the fleet is expected to grow significantly up until mid-2028, with an additional 18 of the MAXs. The contract includes component MRO services, access to the spare parts pool and logistics support through stock allocations at Air Europa's bases at Madrid/Barajas and Mallorca.

Pedro Macías Domínguez, Air Europa's chief technical officer, said: "Our decision to continue working with Lufthansa Technik in the field of component support, and to expand the new contract to cover even more aircraft, is based on the strong and reliable performance their teams have demonstrated over the years, as well as their quality, flexibility and depth of engineering expertise. We are confident that this partnership will play a key role in maintaining and enhancing the operational excellence of Air Europa."

Elsewhere, a partnership between Lufthansa Technik and ACC Columbia Jet Services is set to expand the availability of its Cyclean engine wash solution across Europe. From August 2025, the fellow German MRO began providing on-site engine core wash services as an authorised service provider for Lufthansa Technik at various locations across Europe. Florian Prinz, head of engine life cycle services at Lufthansa Technik, explained: "We are collaborating with ACC Columbia Jet Service to strengthen our network and expand our service offer for Cyclean engine washes in Europe. This development will benefit airlines operating in the region by providing easy access to efficient engine washes using our advanced system."

In other news, a ten-year support contract with South Korean, self-styled 'hybrid' carrier, Air Premia, will see Lufthansa Technik provide long-term TCS support for around half of the airline's eight-strong Boeing 787-9 Dreamliner fleet. It will also establish a home base stock pool for Air Premia's technical operations centre at Seoul/Incheon. Paul S Kim, vice-president of purchasing for Air Premia, said: "Especially in light of the current global supply chain situation, we were looking for a strong player with proven expertise for the Boeing 787 as our sole aircraft type. In the industry, the brand Lufthansa Technik has an outstanding reputation for latest-generation aircraft. On the one hand, it was their competitive pricing that convinced us to sign. On the other hand, it was their enormous flexibility in customising our new co-operation – for example, by being able to also meet non-standard requirements such as our dedicated home base stock in Seoul." (Photo Air Premia)

Capacity boost for ST Engineering

Singapore-based ST Engineering opened its new engine MRO facility at Paya Lebar on September 15.

The new facility is an expansion of it's engine MRO operations within its existing aerospace compound at Paya Lebar, allowing the company to progressively double its capacity for CFM56 and LEAP powerplants to over 300 engines per year by 2027. In combination with its Xiamen facility, the MRO provider will have the capacity to exceed 400 engine shop visits each year.

Jeffrey Lam (pictured, third from left), president of commercial aerospace at ST Engineering, commented: "This expansion reflects our commitment to staying ahead of industry demand and delivering the highest standards in engine MRO, supporting both airline customers and engine OEMs. As airlines expand and renew their fleets, and with more new-generation LEAP engines entering into service, our new capacity and technology-enabled workforce will position us well to support airline and operator customers worldwide."

In 2023, ST Engineering became the first Asian Premier MRO, as designated by CFMI. (Photo ST Engineering)

The latest news from maintenance, repair and overhaul providers

By Nigel Pittaway

100 up!

Lufthansa Technik has inducted its 100th LEAP engine since becoming a CFM Branded Services Agreement partner in 2020. The powerplant, a LEAP-1B from Brazilian carrier GOL Linhas Aéreas, was inducted into its Hamburg shop during September. Marking the occasion, Gaël Méheust, president and CEO of CFM International, said: "Lufthansa Technik's 100th CFM LEAP engine induction is a testament to its capabilities and to the value of CFM's open MRO ecosystem. [It] is bringing important capacity to help meet the ramp in demand for LEAP engine services." (Photo Lufthansa Technik)

100
We power your LEAP
100th LEAP induction in Hamburg

Contract joy at AFI KLM E&M

Air France Industries-KLM Engineering and Maintenance (AFI KLM E&M) has signed a long-term component support agreement with Asia Digital Engineering (ADE) to maintain AirAsia Group's new Airbus A321neo fleet. ADE will provide support for the 377-strong fleet across the group's multiple affiliates spanning Malaysia and Thailand. Mahesh Kumar, CEO at ADE, said: "This new agreement underscores our commitment to driving operational efficiency while upholding the highest standards of safety and reliability across the AirAsia Group fleet. Operating a fleet of new-generation aircraft at this scale demands adaptive, world-class solutions, and we are confident [they] will deliver the responsiveness, reliability and performance vital to our continued success."

In other news, a comprehensive and long-term new power-by-the-hour (PBH) arrangement with VietJet Air Thailand will cover component support of the carrier's 50 Boeing 737 MAX 8s. The deal includes a full component repair service and access to AFI KLM E&M's worldwide spares pool and main base kit (MBK) support. The agreement is billed as the first of its kind in Thailand. Woranate Laprabang, CEO of VietJet Air Thailand, said: "This agreement marks an important step in our collaboration. Their knowhow and experience is a warranty for a smooth and reliable entry in service for the Boeing 737 MAX 8 in our fleet. It not only ensures the highest level of technical support for our fleet but also reflects our confidence in their global expertise and proven ability to keep our operations reliable and efficient, ultimately allowing us to deliver a seamless, safe and high-quality flying experience to our customers."

Elsewhere, AFI KLM E&M has agreed to a six-year component support contract with South Korean start-up Parata Air, covering it's Airbus A330 fleet. The airline, which is part of the Winix Group, launched operations with a fleet of six A330-200s on September 30. Yoon Chulmin, CEO of Parata Air, explained: "As we launch with the brand slogan 'Fly New, Fly Happy, Fly Together', we are delighted to partner with AFI KLM E&M for our Airbus fleet. Their global knowhow and regional support capabilities give us the confidence to deliver exceptional service and reliability to our future passengers." (Photo ADE)

FL Technics Scandinavian expansion

FL Technics has opened 14 new line maintenance stations at airports across Scandinavia, significantly increasing its presence in northern Europe. Over a six month period, it opened facilities in Ålesund, Atla, Bodø, Harstad/Narvik, Kirkenes, Kristiansand and Svalbard in Norway, plus Åre/Östersund, Kiruna, Luleå, Malmö, Nyköping, Skellefteå and Umeå in Sweden. Nerijus Chormanskis, head of commercial for line maintenance at FL Technics, said: "Expanding into Scandinavia was a natural step given the growing need for quick, reliable support in the region. In just six months, we've established a network that delivers the world class maintenance services precisely where our clients need them."

In other news, the MRO provider has announced it will build what it says will be "Europe's largest wheels and brakes MRO network", as airlines seek profitability by outsourcing maintenance. It currently operates European wheels and brake shops in Hanover (Germany), Budapest (Hungary) and Vilnius (Lithuania), with the 2025 addition of a new 2,575m^2 facility in Bergamo (Italy). Zilvinas Lapinskas (pictured), CEO of FL Technics Group, explained: "Airlines want to focus on core operations, and while wheels and brakes maintenance might look straightforward on the surface, it can add extensive overhead and back office complexity. Having a dedicated partner, on the other hand, adds a layer of security, which is why we are currently seeing a shift toward outsourcing wheels and brakes maintenance.

"The locations of all four facilities were chosen based on several key criteria: we wanted to be both close

to the airports that our existing and potential clients use and to have excellent connectivity via the main road arteries in those locations. This means we can help our clients significantly save on logistics costs, while providing them with shorter turnaround times." (Photo FL Technics)

Letters to the editor

Dear Editor,
I am a monthly subscriber to *Airliner World* and have been reading the magazine since 2011. I am also a fan of Singapore Airlines and was therefore delighted that the October issue featured an eight-page feature on the airline. Given that I was flying with the carrier in October, I thought I'd bring the magazine along on the flight and get a photo with the cabin crew holding the issue, which they were only too happy to do.
It made my day!
Matt Smith

Ed: Thanks for the message, Matt. We're glad to hear you're a fan of the magazine and that the Singapore Airlines cabin crew were too! What a great picture!

Dear Editor,
I read with interest Jonathon Hinkles' *Sky View* article on pilot retirement age. I flew for British Airways until I reached 55, the normal retirement age for pilots, before joining easyJet for the following ten years, retiring at 65 in 2016. I enjoyed my whole career, but felt both airlines were happy to see me go as I reached the top of the salary tree and became an expensive asset.

As a requirement for flying over the age of 60, my co-pilot had to be under 60 to mitigate the risk of incapacitation. However, at easyJet, I often found myself flying with a 200-hour cadet who was capable and enthusiastic but sadly lacking in experience. When flying to a category C airport or to the UK, into the teeth of one of the seemingly more frequent named storms, with turbulence, on-limits crosswinds and mass diversions, I used to discuss what to do and where to go in the event of my incapacitation. I emphasised the need for assertiveness and clarity in dealing with ATC.

Jonathan mentioned the automatics on modern jets as a mitigation. These are a double-edged sword, making life easier in some respects, but also being more complex and confusing when under stress and prone to doing the unexpected when not properly monitored.

When I approached my retirement age, I discussed this issue with my AME, who described the risk of medical issues, particularly cardiovascular events, increasing exponentially above 65 – ask any insurance underwriter. I had an abnormal ECG when I was about 60, which led to a more in-depth investigation at the CAA before allowing me to renew my medical certificate. I felt as fit as a fiddle, playing squash regularly.

I settled into retirement in 2016, and it was barely two years later that I collapsed with an internal rupture of my aorta, happening when driving to play a village skittles game at the pub. The medical term for this is an aorta dissection. Admittedly, it is not a common condition, but it has a high mortality rate and I was lucky to survive. I believe the only way to have seen this coming would have been with a CT scan. Imagine paying for that every six months!

Having said that, I have a friend in South Africa who continued to fly quite happily after the age of 65. Lower monthly duty hours as a mitigation for the stress may be a solution to beating that exponential curve.
Yours,
Richard Westray (Captain, retired)

Ed: Thanks for the very interesting email, Richard. It's great to hear a pilot's perspective on the issues surrounding pilot retirement ages and the challenges arising. We hope you are enjoying your retirement.

Air New Zealand Dream Seats take off

Air New Zealand has announced the first recipients of its nationwide Dream Seats campaign, helping New Zealanders with a dream take the next step towards their goals. First launched in July, the airline received more than 8,000 applications.

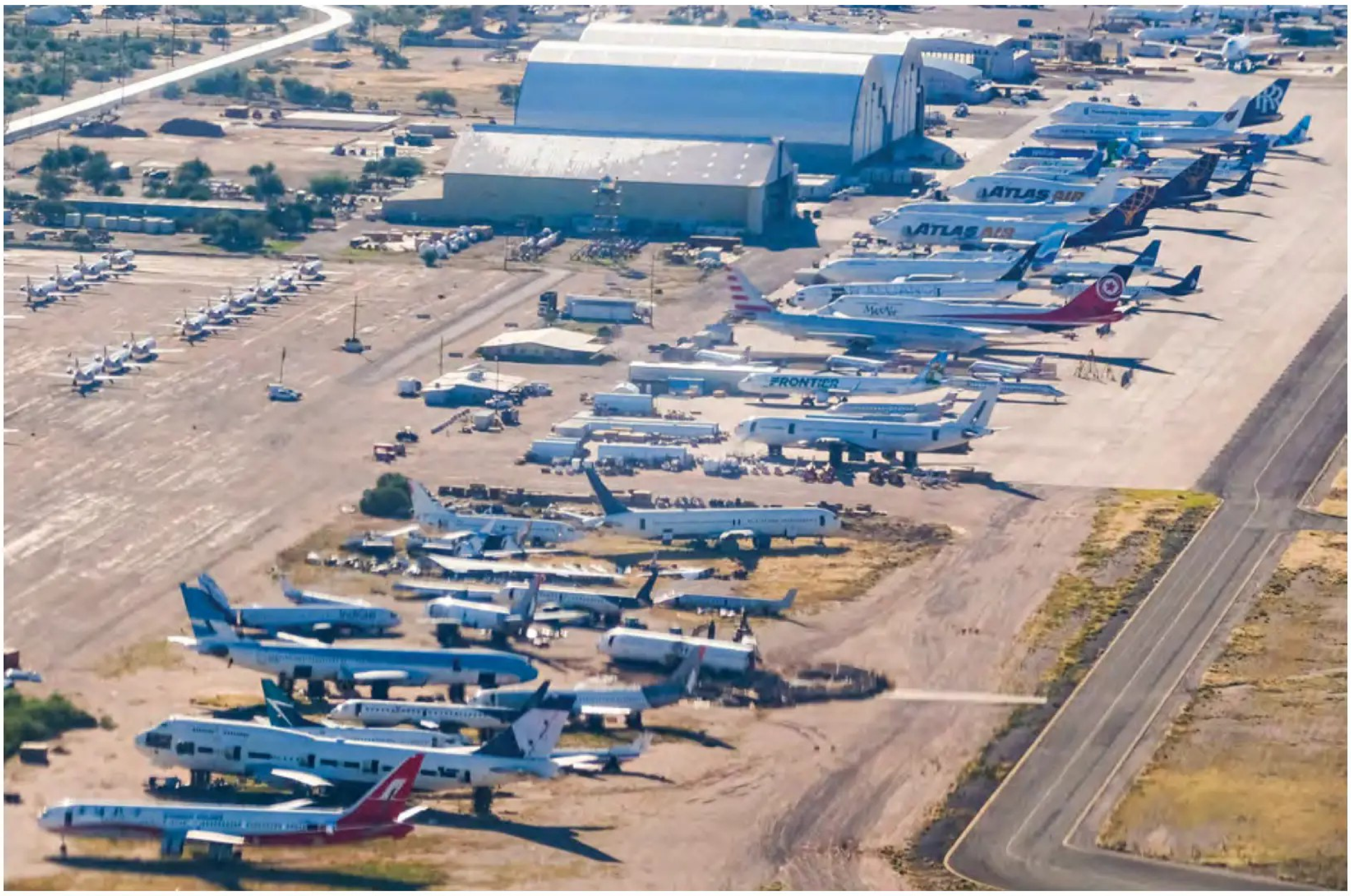
Now, over 100 successful recipients will receive flights to help them pursue their dreams. A further lucky few will receive personalised mentoring from a selection of Kiwi greats, including golfing legend Ryan Fox and celebrity chef Josh Emett.

The airline's outgoing CEO, Greg Foran, said that the Dream Seats applications have so far been amazing, adding that the airline was "delighted to play a small part in helping them get to where they need to be."
(Photo Air New Zealand)

Dream Seats

Postcards from Pinal

One of *Airliner World's* subscribers, **Alan Cookson**, recently spent some time in the US, conducting an overflight of the aircraft storage facility at Marana Pinal Airpark in Arizona. Here are a selection of his shots



LEFT: ***An overview of the Marana Pinal Airpark, highlighting the vast array of airliners currently stored at the airfield*** ALL IMAGES ALAN COOKSON

BELOW: ***Trijet heaven! A selection of McDonnell Douglas DC-10s, including, in the foreground, this -40, N852V (c/n 47852), which started life with Japan Airlines in December 1980 before becoming part of the Omega Aerial Refueling Services fleet in April 2004***

RIGHT: ***Boeing 747-8JA BBJ, formerly HZ-HMS1 (c/n 40065), is the world's first 747-8 airframe to be scrapped after less than 30 flight hours spent in service. It was first commissioned by the Saudi Arabian Royal Flight in 2012, but was not taken up***

GLOBAL AIRTANKER SERVICE

This 2000 Airbus A340-313, N577TA (c/n 355), still wears the livery of its former owner, the German Luftwaffe. CSDS Aircraft Sales and Leasing acquired it in March 2024 and it has been stored at Pinal since April 2025

A selection of Boeing 747 'classics', including this former All Nippon Airways 747SR-81, N245BA (c/n 22595). In the background is an ex-Northwest Cargo 747-251F, N618US (c/n 21122), and a Trans World Airlines (TWA) example

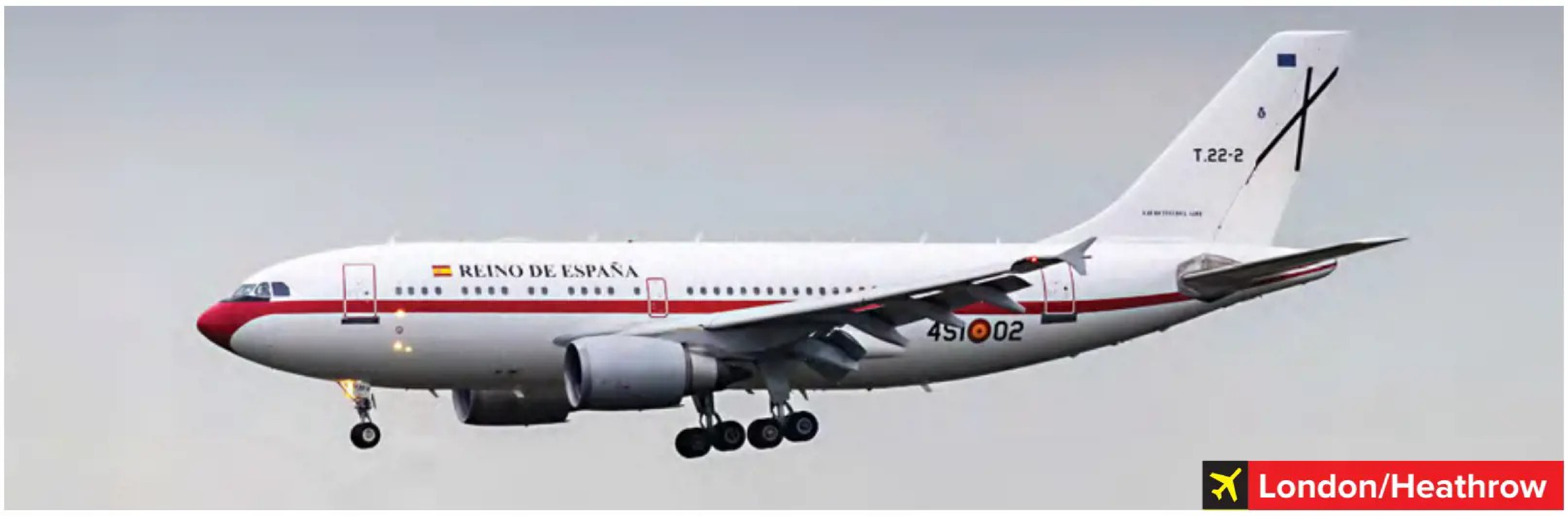
This Boeing 767-3P6ER, 8Q-MEG (c/n 24496), still wears the livery and registration of its former operator, Mega Global Airlines. The widebody twin was delivered new to Gulf Air in June 1989

***GET IN TOUCH** WITH AIRLINER WORLD*

Do you have a historical tale, burning question, or comment about the magazine to share with our global audience? Get in touch via airlinerworld@keypublishing.com with the subject 'Letters to the Editor', or drop us a message on Facebook.com/AirlinerWorld, on Twitter @_AirlinerWorld or join the debate on our Key.Aero forum. As we return to the editorial office, we are also able to welcome letters once again – the postal address is: *Airliner World*, **PO Box 100, Stamford, Lincolnshire, PE9 1XQ**

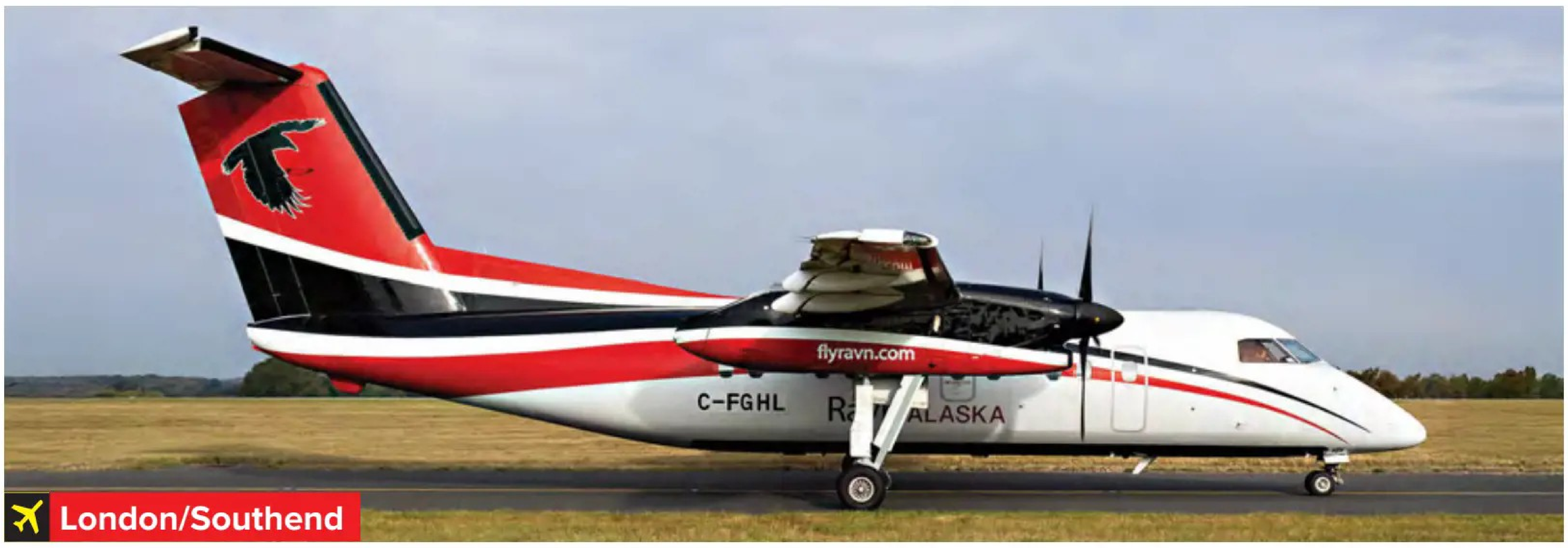
UK *Visitors*

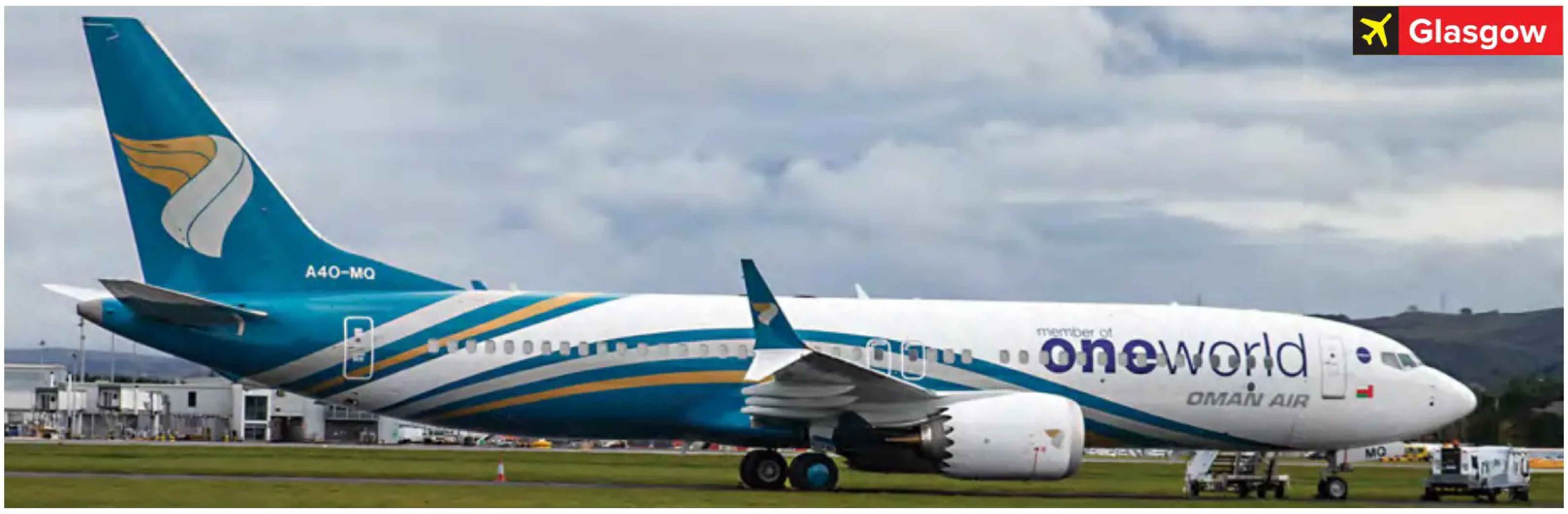
We present a selection of images of visiting aircraft from airports around the UK. For the most part, they're commercial jets, but almost all of them are unusual types, wearing new or unique liveries, or first visits by an airline or airliner to a particular airport. If you see something out of the ordinary while on your travels, please send in your pictures. Photos can be emailed to **airlinerworld@keypublishing.com** Please ensure you provide full details with the images, particularly the date, location, airline name and aircraft identity



Captured on approach to London/Heathrow is this classic Airbus A310-304 T.22-2 (c/n 551) – fleet number 451-02 – belonging to Fuerza Aérea Española (Spanish Air Force). The 35-year-old airframe started life with Air France before being delivered to Spain in May 2002 and converted into a VIP configuration ANDY CROSSLEY

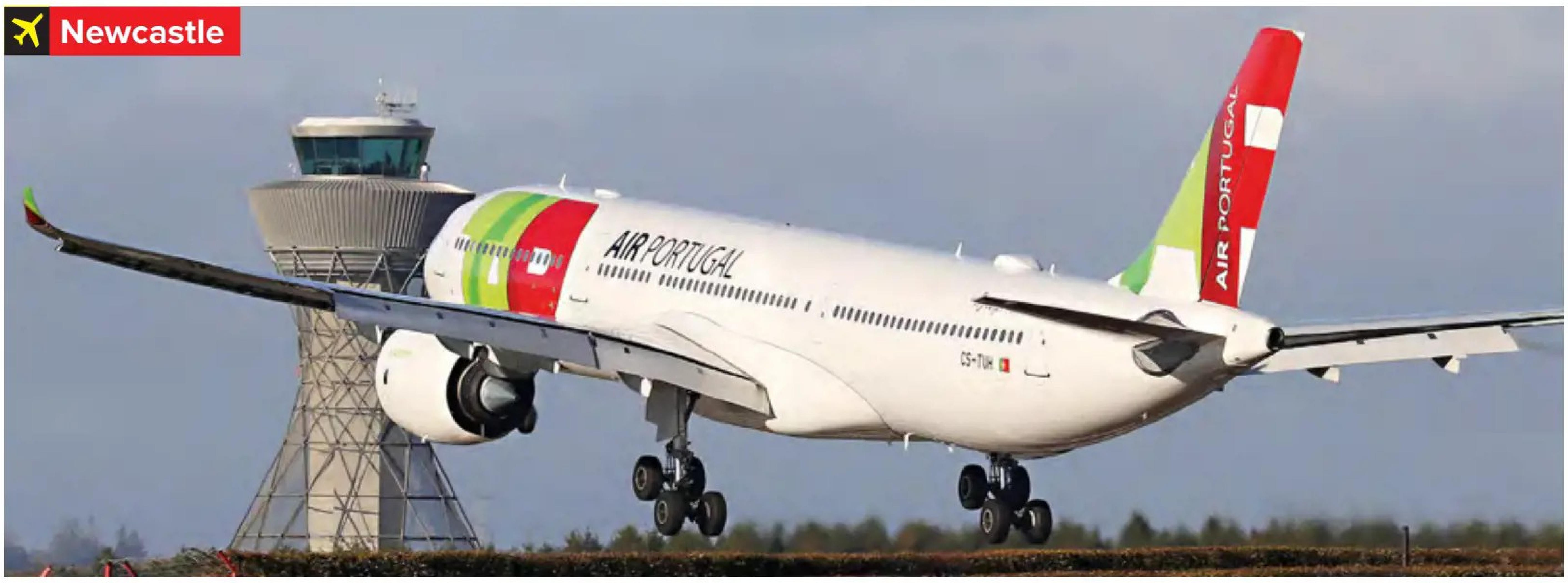
An interesting movement for London/Southend in October was this de Havilland Canada Dash 8-100, C-FGHL (c/n 389), which was on its way to its new owners, Renegade Air of Kenya. The aircraft had arrived from Reykjavík and, after a short stop on the Essex coast, continued to Skopje. It has since been re-registered as 5Y-RNN DAVE POTTER

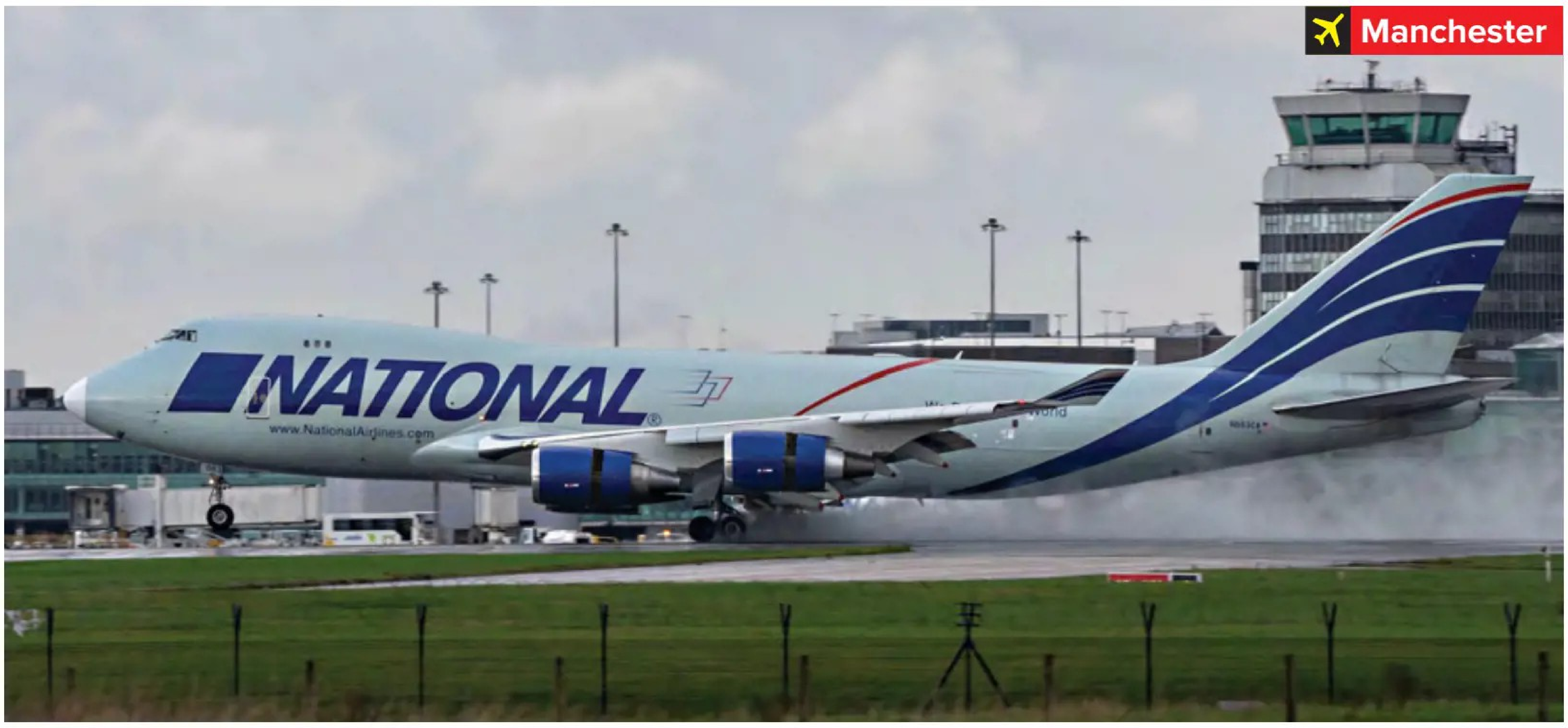




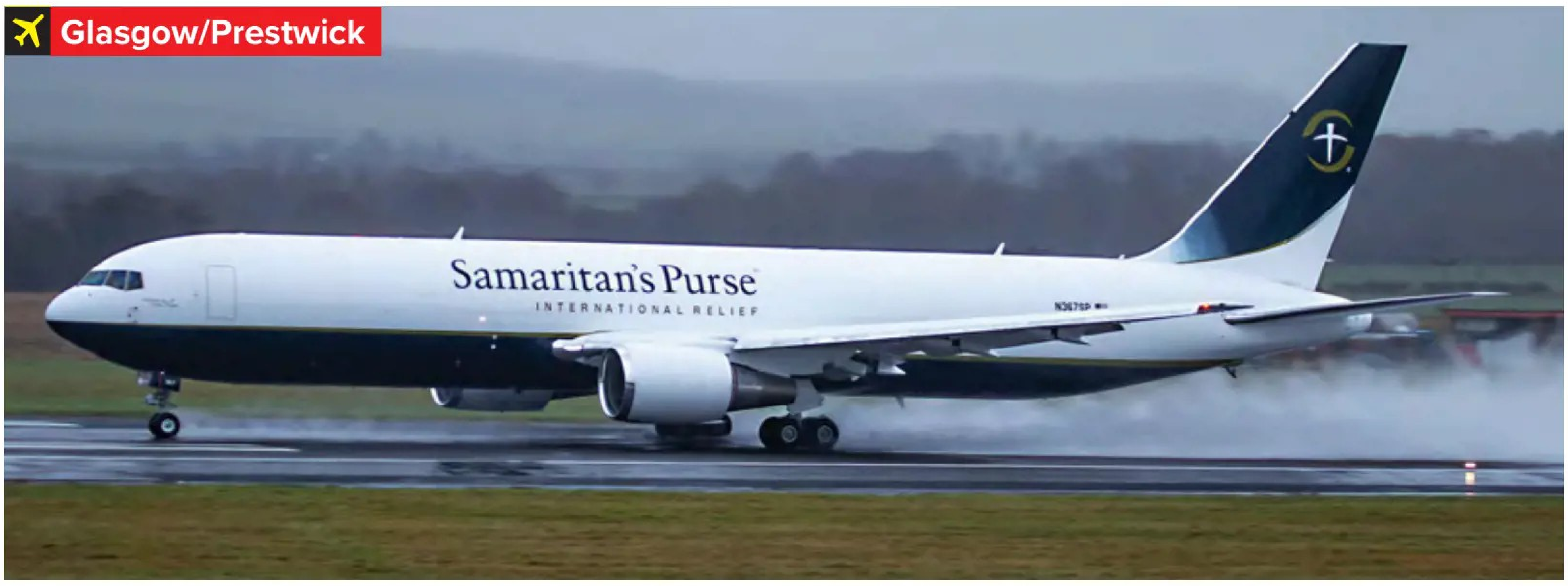
Oman's latest Boeing 737 MAX 8, A4O-MQ (c/n 63371), wearing oneworld billboard titles, was delivered through Glasgow on October 21. The aircraft arrived from Seattle/Boeing Field, before continuing to its new home at Muscat the following day B1-IMAGES

Taking a break from its usual transatlantic crossings was this Airbus A330-941, CS-TUH (c/n 1906), belonging to TAP Air Portugal. The jet had arrived in Newcastle from Lisbon to take José Mourinho's S.L. Benfica team to Portugal following their Champions League match against Newcastle United the previous evening NICK FENWICK

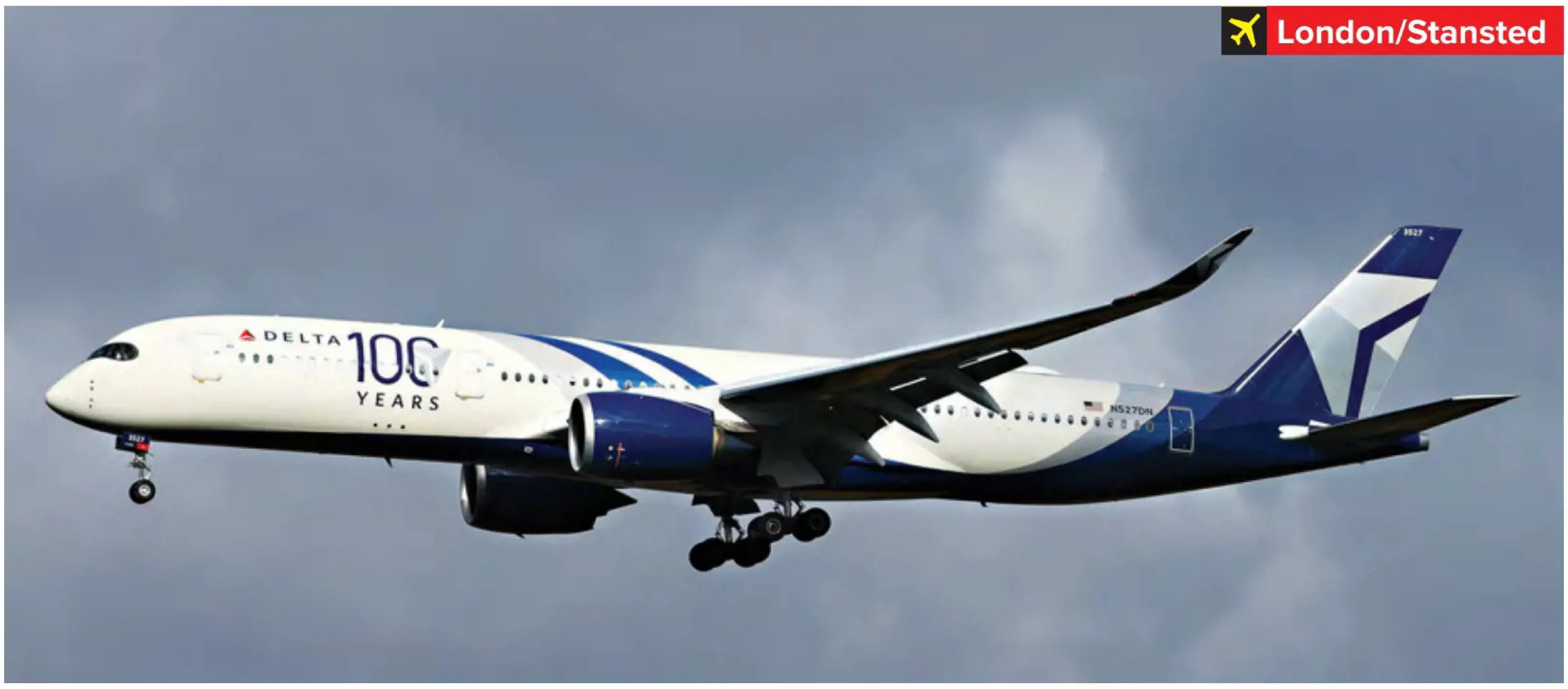



Manchester
NATIONAL
www.NationalAirlines.com

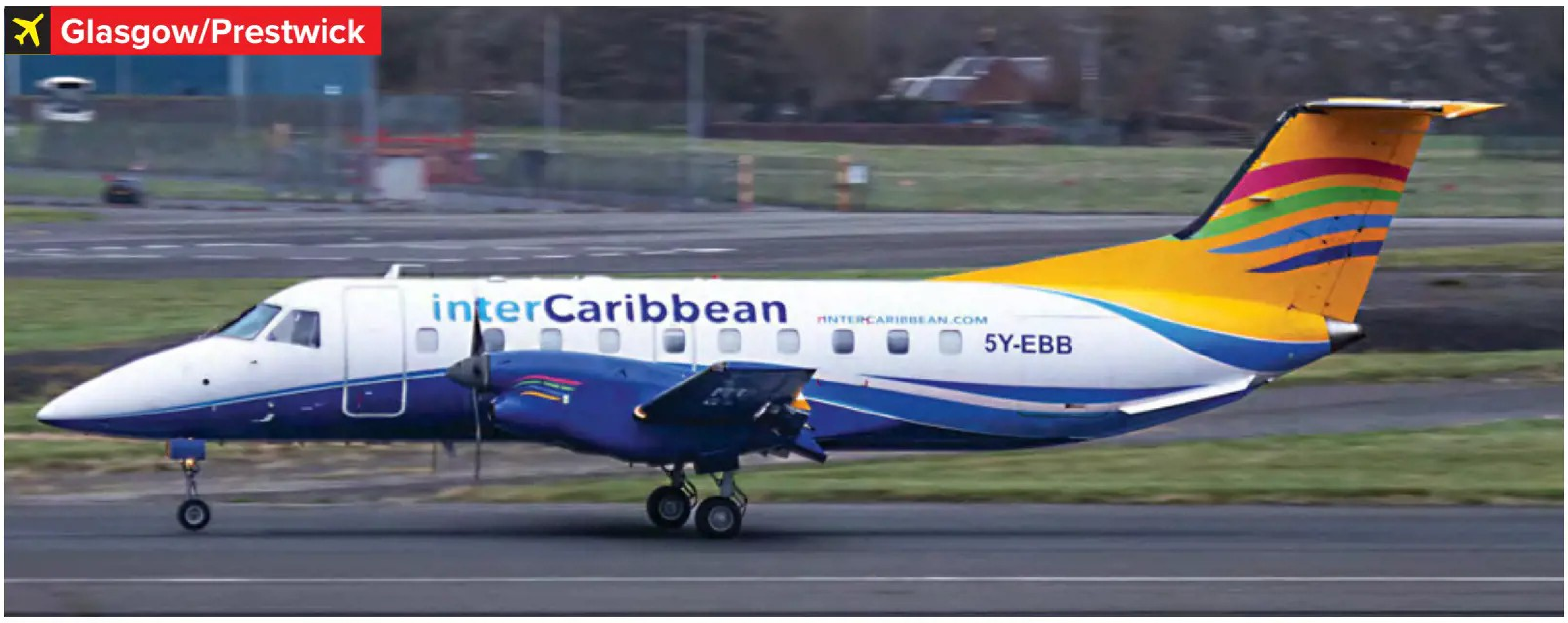
The Queen of the Skies was once a familiar fixture at Manchester. So, the arrival of National Airlines Boeing 747-4HAERF, N663CA (c/n 35237) on October 22 was a welcome sight. Here it is landing from Dallas/Fort Worth before positioning out empty later that day to Mumbai
ROSS HARWOOD


Glasgow/Prestwick
Samaritan's Purse
INTERNATIONAL RELIEF
N367SP

Seen departing a very wet Glasgow/Prestwick for Larnaca, Cyprus, was Samaritan's Purse's new Boeing 767-381F, N367SP (c/n 33510). It had previously served with All Nippon Airways Cargo and, more recently, Qantas Freight. The evangelical humanitarian relief organisation acquired it in February 2025 as a replacement for its long-serving Douglas DC-8 (see page 22)
STUART HAIGH


London/Stansted
DELTA
100
YEARS
N527DN

An unusual visitor to London/Stansted was this Airbus A350-941 N527DN (c/n 720) belonging to Delta Air Lines and wearing the airline's centenary colour scheme. After operating a scheduled service from Detroit to Amsterdam on October 4, it positioned from Schiphol to Stansted the following day, in support of an NFL game taking place at Tottenham Hotspur's football stadium. It then hopped back across the pond to Minneapolis
DAVE POTTER


Glasgow/Prestwick
interCaribbean
INTERCARIBBEAN.COM
5Y-EBB

Passing through Prestwick on October 5 was this former InterCaribbean Airways Embraer EMB-120ER 'Brasilia'. The aircraft, now registered 5Y-EBB (c/n 120268), was being delivered to an undisclosed customer in Kenya and had arrived from Reykjavík before continuing to Palermo
STUART HAIGH

The latest training aids available for the aviation professional

Dutch A350 sim delivery

KLM has introduced the Netherlands' first Airbus A350 full-flight simulator, marking a major milestone in preparations for the type's entry into the airline's fleet at the end of 2026. Built by CAE in Montreal, the advanced simulator replicates the A350 cockpit and systems in detail, allowing KLM pilots to train on the latest technologies and procedures in a fully realistic environment.

The acceptance process in Canada mirrored that of a real aircraft delivery, with the simulator undergoing extensive testing before being shipped to the Netherlands. Installation at Schiphol-East presented a unique logistical challenge: due to its size, the simulator had to be hoisted over the perimeter fence rather than brought through the main gate. Now fully operational, it will soon be used to train KLM's first group of A350 pilots.

The addition represents a key step in KLM's fleet modernisation programme, as the Airbus A350 becomes its next-generation long-haul flagship. (Photo KLM)

KLM
CAE
A350

New pilot training centre in India

Airbus and Air India have inaugurated a new pilot training centre in Gurugram, Haryana, designed to train more than 5,000 new pilots over the next decade and support India's rapidly expanding aviation sector.

The 130,000sq ft facility, a 50:50 joint venture between the two companies, was formally opened on September 30 by India's Minister of Civil Aviation, Shri Rammohan Naidu Kinjarapu, alongside Air India CEO Campbell Wilson and Airbus Commercial Aircraft CEO Christian Scherer.

Equipped with ten full-flight simulators, modern classrooms and briefing suites, the centre will train flight crews for the Airbus A320 and A350 families, with courses approved by both the DGCA and EASA.

Wilson said the initiative would "train and upskill pilots who will fuel Air India's ambition of becoming a world-class airline", noting that it formed a key part of the carrier's transformation and fleet expansion, with 570 new aircraft on order.

Airbus India president Jürgen Westermeier described the centre as a "strategic investment in the future of Indian aviation", adding that it underlines the manufacturer's long-term commitment to developing aerospace capability in one of the world's fastest-growing markets.

The new Gurugram facility complements Airbus' existing A320 training hub in New Delhi, together forming a 14-simulator network supporting the growth of India's airline industry. (Photo Airbus)

Oman Air achieves ATO approval

Flag carrier Oman Air has been awarded Approved Training Organisation (ATO) certification by the Civil Aviation Authority (CAA) of Oman, becoming the country's first facility authorised to provide type rating training for Boeing aircraft. The certification was formally presented by CAA president Naif Al Abri during a ceremony at the carrier's Flight Training Centre in Seeb.

With ATO status, Oman Air can now conduct comprehensive flight training under the latest regulatory framework, including programmes for both new cadets and current pilots transitioning from the Airbus fleet to the Boeing 787 and 737. The airline has already begun training its first group of cadets graduating from the Airline Transport Pilot Licence (ATPL) programme.

Al Abri praised Oman Air's contribution to developing the Sultanate's aviation capability, saying the achievement supports "national capability-building and the long-term growth of the sector in line with Oman Vision 2040."

Chief operating officer Nasser Al Salmi described the certification as "a major step forward," adding that it "strengthens Oman's position as a centre of excellence in aviation training."

Oman Air currently maintains an 88% 'Omanisation' rate among its pilots, marking a 6% increase over the last two years. (Photo Oman Air)

New A320neo sim for Cathay

A new CAE Airbus A320neo full-flight simulator has been installed at the Cathay Flight Training Centre.

Cathay Pacific is currently investing over HK$100bn in overhauling its fleet, cabins, lounge products and digital innovation. This includes adding new aircraft to the fleet, including over 30 Airbus A320neo Family airliners.

The airline's chief operations and service delivery officer, Alex McGowan, said: "Cathay and CAE have built a longstanding partnership focused on delivering high-quality training for pilots and crew, with a shared commitment to safety and operational excellence. Over the years, we have integrated a wide range of CAE training devices at our Flight Training Centre in Hong Kong. This partnership has helped Cathay to establish a state-of-the-art training environment, supporting the development of world-class aviation professionals.

"The recent addition of the A320 Neo CAE 7000XR Simulator marks another milestone in this collaboration, further strengthening Cathay's training capabilities, advancing our training technologies, as well as nurturing future aviation talent." (Photo Cathay Pacific)

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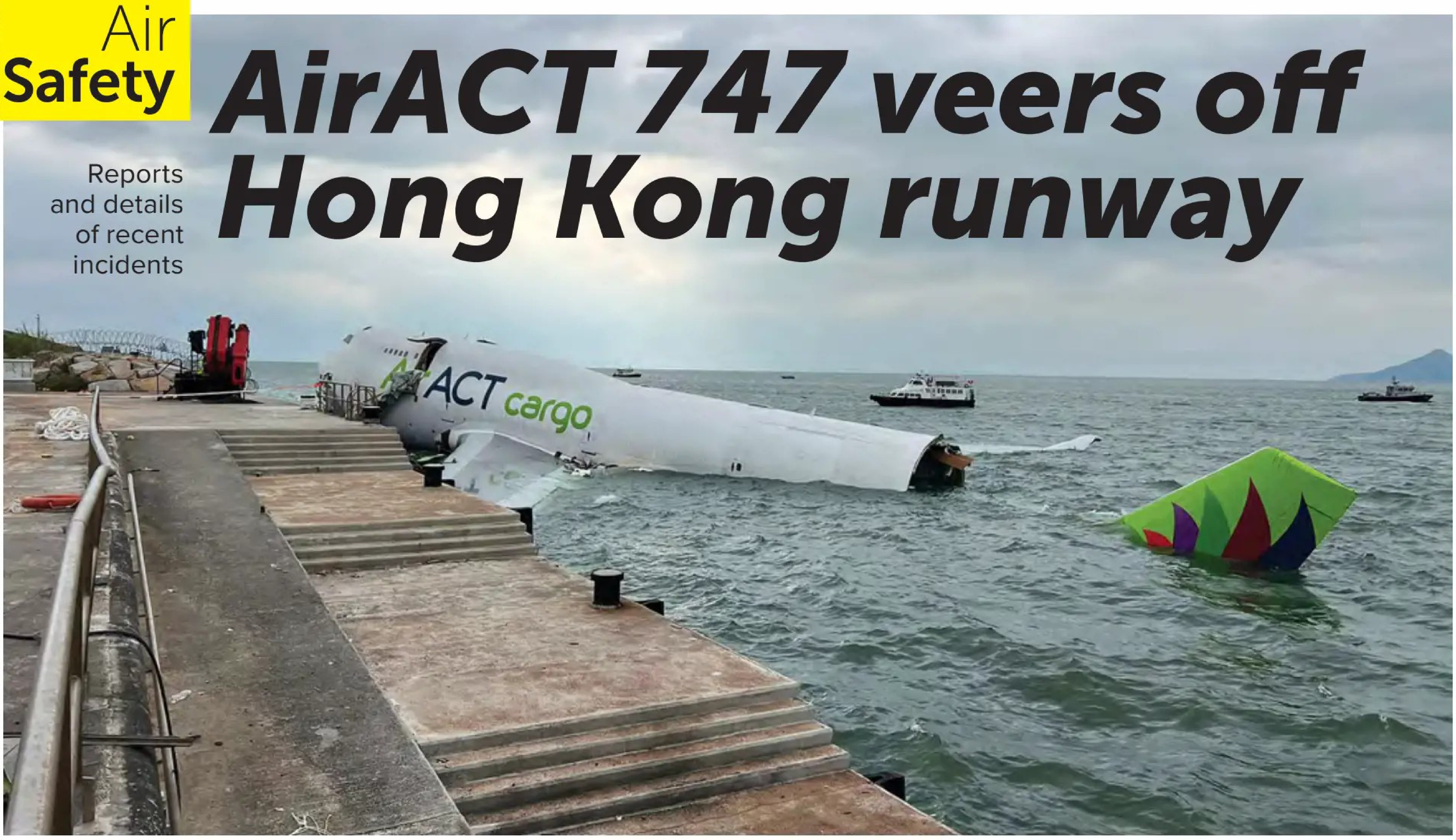
982/25

AirACT 747 veers off Hong Kong runway



ABOVE: *The freighter broke through the perimeter fence before coming to rest in the waters off the northern side of the runway*
ALL IMAGES AAHK

Two airport security staff were killed when an AirACT Boeing 747 operating for Emirates SkyCargo veered off Hong Kong International Airport's runway 07L and into the sea during landing on October 20.

The 747-481BDSF, TC-ACF (c/n 25645), operating as flight UAE9788 from Dubai/Al Maktoum, was carrying four crew members when it was suspected to have lost control upon landing at 0353hrs local time, according to the Airport Authority Hong Kong (AAHK). The freighter broke through the perimeter fence before coming to rest in the waters off the northern side of the runway.

At the time, a patrol car from the Aviation Security Company Limited was conducting perimeter duties and was struck by the aircraft and pushed into the water. Both security officers were recovered but did not survive. One was pronounced dead at the scene and the other in hospital later. All four flight crew were rescued.

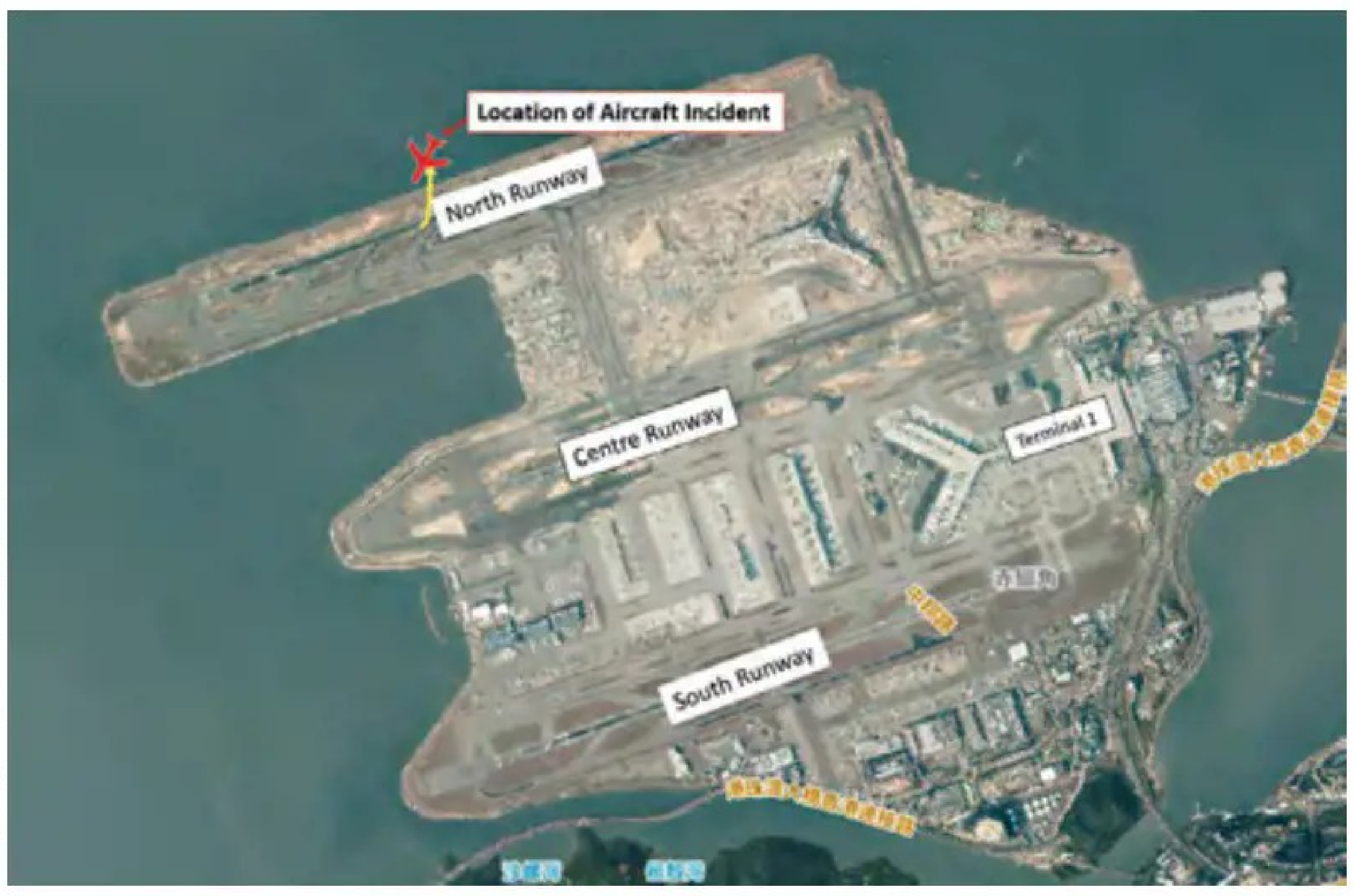
The Air Accident Investigation Authority (AAIA) confirmed it had launched a formal investigation into the accident, stating that its team was "collecting data and information, as well as identifying areas for further investigation… with the objective of identifying the circumstances and causes of the accident with a view to preventing recurrence."

Runway 07L was temporarily closed for rescue work and evidence collection, while the airport's two other runways, 07C/25C and 07R/25L, remained operational. Following inspections and repairs to fences, lighting and surface damage, runway 07L reopened on October 21 but remained in a stand-by mode, with availability subject to air traffic control, to facilitate the removal of the aircraft from the sea.

A large-scale salvage operation was subsequently co-ordinated by AAHK, with support from the Guangzhou Salvage Bureau and Chu Kong Passenger Transport Company. Two specialist lift vessels were deployed with around 80 engineers, divers and machinists to recover the aircraft from shallow waters.

On October 24, the aircraft's tail section, landing gear and one engine were recovered, along with an

RIGHT: *On October 24, the aircraft's tail section, landing gear and one engine were recovered, along with an unspecified flight recorder, which was handed to the AAIA*



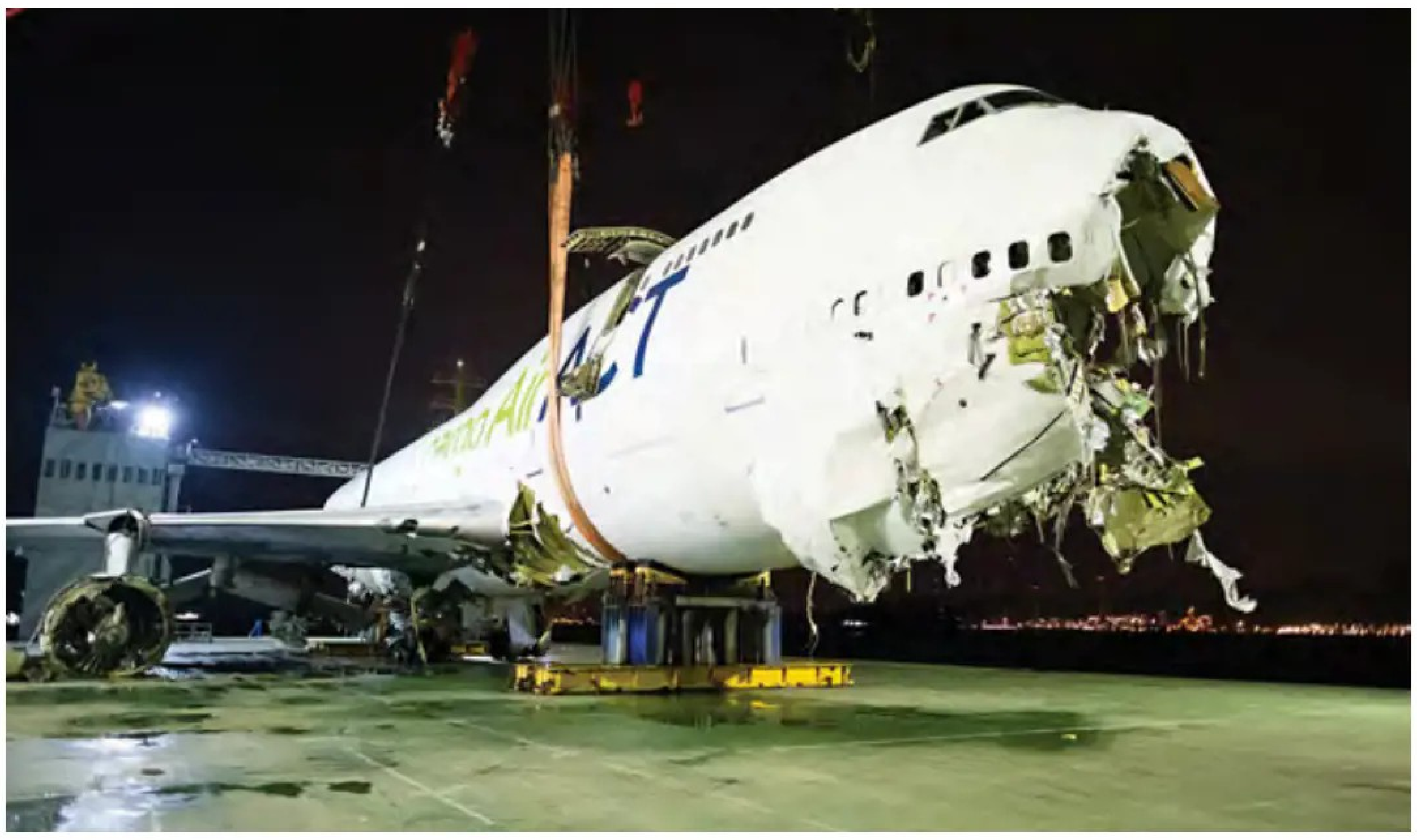
BELOW: *A map showing the crash in relation the airport layout*

BOTTOM RIGHT: *The main fuselage was lifted onto a barge on October 26, then moved to a secure storage site for further analysis* unspecified flight recorder, which was handed to the AAIA. Two days later, on October 26, the main fuselage was lifted onto a barge and moved to a secure storage site for further analysis.

AAHK expressed its condolences to the families of the two airport security staff and said it was providing full support. It added that it is continuing to co-operate with the ongoing investigation. In a separate statement, AirACT said: "We extend our deepest condolences to the families and loved ones of those who lost their lives. An investigation into this tragic accident is being conducted by the relevant authorities. [AirACT] is in close contact with the official teams and continues to fully co-operate with utmost diligence."

Flight operations at Hong Kong International Airport have remained normal since October 24. All salvage work was concluded by October 27.

Based in Istanbul and founded in 2004, AirACT operated a pair of 747s. TC-ACF's sister ship, 747-481BDSF, TC-ACG (c/n 25641), has continued to operate as normal on behalf of Emirates since the incident.



LEFT: ***Based in Istanbul and founded in 2004, AirACT operated a pair of 747s***

Nouvelair near-miss at Nice

French investigators have revealed that a Nouvelair Airbus A320 potentially descended to within 10ft of a waiting easyJet A320 after lining up with the wrong runway during approach at Nice Côte d'Azur Airport on September 21.

The aircraft, TS-INP (c/n 1597), arriving from Tunis/Carthage as flight LBT586 had been cleared to land on runway 04L, but instead aligned with the parallel 04R, which was being used for departures. According to the Bureau d'Enquêtes et d'Analyses (BEA), the A320 passed directly over the easyJet airliner – which was positioned on the 04R centreline ready for departure – before initiating a go-around.

The BEA's preliminary report indicates that, on short final, the Nouvelair crew received automated height callouts at 100, 50, 40 and 30ft. The aircraft's radio-altimeter reading then momentarily dropped from 39ft to 10ft, before returning to 24ft – a fluctuation the BEA says corresponds to the moment the A320 passed over the easyJet aircraft. The 20ft callout and 'retard' instruction followed immediately afterwards, as the tower controller ordered a go-around. The agency confirmed that the Nouvelair's main landing gear never touched the runway.

The incident occurred in darkness and reduced visibility, with the inbound A320 conducting an RNP approach to 04L after diverting around storm activity. The easyJet crew had earlier been cleared to cross 04L and line up on 04R, where they paused before preparing for departure.

As the Nouvelair aircraft turned north to visually align with the runway, the autopilot was disengaged at approximately 2,000ft during descent. About 30 seconds later, the aircraft began a right-hand turn, and the pilot flying (PF) reported the runway in sight. However, instead of aligning with 04L as intended, the crew mistakenly lined up with 04R.

At the same time, the easyJet crew informed air traffic control (ATC) that they were ready for departure from 04R, while the Nouvelair jet was descending through 1,000ft – still in the right-hand turn. By the time it passed through 527ft, the Nouvelair A320 had fully aligned with 04R, where the easyJet aircraft was getting into position. Two successive runway incursion alerts sounded in the control tower. The first occurred when the easyJet aircraft entered runway 04R, while TS-INP was at 492ft. The second alert was activated when the A320 was at 448ft, around 1nm from the threshold. The second alert prompted controllers to reconfirm the landing clearance. Believing they were aligned with 04L, the Nouvelair crew read back the instruction and continued the approach until the near-miss occurred. The Nouvelair A320 made a safe landing on 04L about 16 minutes later, while the easyJet flight taxied back to the apron.

The BEA highlighted significant differences in illumination between the two runways, noting that 04R's lighting is "much brighter" at night than 04L's. It also pointed out that the precision approach path indicator (PAPI) lights for 04L are located on the right-hand side of the runway, rather than the usual left-hand position, which may have contributed to visual misidentification.

Investigators added that Nice's reversed runway configuration – using 04L (closest to the terminal) for arrivals and 04R for departures – differs from previous practice and was adopted to reduce noise over nearby urban areas.

The investigation remains ongoing as BEA continues to analyse crew actions, ATC procedures, runway-lighting contrast and approach design to determine the underlying causes of the serious incident. AW

DATE	REG'N	C/N	TYPE	OPERATOR	FATALITIES	LOCATION	NOTES
October 1	N480PX	15480	Bombardier CRJ-900LR	Endeavor Air op for Delta Connection	0	USA	Involved in a ground collision with N902XJ during taxiing at New York/La Guardia. Nose of the aircraft was damaged
October 1	N902XJ	15131	Bombardier CRJ-900LR	Endeavor Air op for Delta Connection	0	USA	Involved in a ground collision with N480PX during taxiing at New York/La Guardia. Right wingtip of the aircraft was damaged
October 12	D-AEAG	621	Airbus A300B4-622RF	European Air Transport op for DHL Aviation	0	UK	Suffered tail strike during go-around at London/Heathrow while attempting to land on runway 09L. Made safe landing on 09R
October 16	N17327	67582	Boeing 737 MAX 8	United Airlines	0	USA	Outer windshield cracked at FL360 causing fragments of glass to enter the flight deck injuring the captain's right arm. Aircraft diverted to Salt Lake City 50 mins later
October 20	TC-ACF	25645	Boeing 747-481BDSF	ACT Airlines op for Emirates SkyCargo	0+2	Hong Kong	Veering left off runway 07L during landing. Struck security vehicle before coming to rest in the sea. Killed two security personnel. Four flight crew rescued
October 28	5Y-CCA	208B1248	Cessna 208B Grand Caravan	Mombasa Air Safari	11	Kenya	Flight between Diani/Ukunda and Kichwa Tembo Airstrip in Maasai Mara. Crashed near Kwale

A new K-pop takes flight

For the first time in more than 40 years, Korean Air has introduced a new corporate identity with far-reaching significance. **Robert Veitch** travels to Seoul to learn more about the regeneration of the airline

SKYTEAM
KOREAN
081
APRON →

Located on the southeastern perimeter of Seoul/Gimpo, a stone's throw from the Han River, is Korean Air's monolithic corporate headquarters. Ascending the 20 steps to the entrance of the eight-storey, 200m-long building was enough to focus the mind, to realise this airline is totemic for the nation it represents. In Korean culture, just as stainless steel chopsticks are used instead of wood or plastic, buildings have no ground floor – the ground floor is the first floor. The lobby is bookended on either side with floor-to-ceiling video walls, one offering a history of the airline, the other live global updates on the airline's outbound and inbound flights from around the world. The carrier moved here in 1997 from its former home in central Seoul.

Korean Air was launched in March 1969 with eight aircraft. Today, it serves ten domestic and 106 international destinations, spanning 39 countries on five continents.

When Walter Cho (Cho Won-tae) became chairman and CEO of the airline in April 2019, he initiated a quiet revolution and the once rigid dress code was replaced with a more relaxed, less stuffy atmosphere. Koreans are well-known for their strong, office-based work ethic, yet the mood inside appeared both relaxed and industrious, a friendly and respectful diligence towards one's duties and colleagues. Although lifts are plentiful, each stairwell contains messages promoting the benefits of being active throughout the working day – 0.15 calories burned per stair tread climbed! All things are indicative of the slow-burning change that has enveloped the airline since 2020 and revealed to the outside world earlier this year.

Transforming the brand

On March 11, Korean Air unveiled a new corporate identity that epitomises its aspiration to be "the world's most loved airline." Its mission is to expand its international presence and global connectivity, to become the airline of choice for both international and domestic travellers. It's called the 'KE Way' and incorporates ambitions of purpose, vision and mission.

The roots of the regeneration were first put down in November 2020, when it was announced that Asiana Airlines would be absorbed into Korean Air. Rivals would become a single entity and, in time, it is hoped the new consolidated enterprise will become the biggest Asian-Pacific airline, and, in terms

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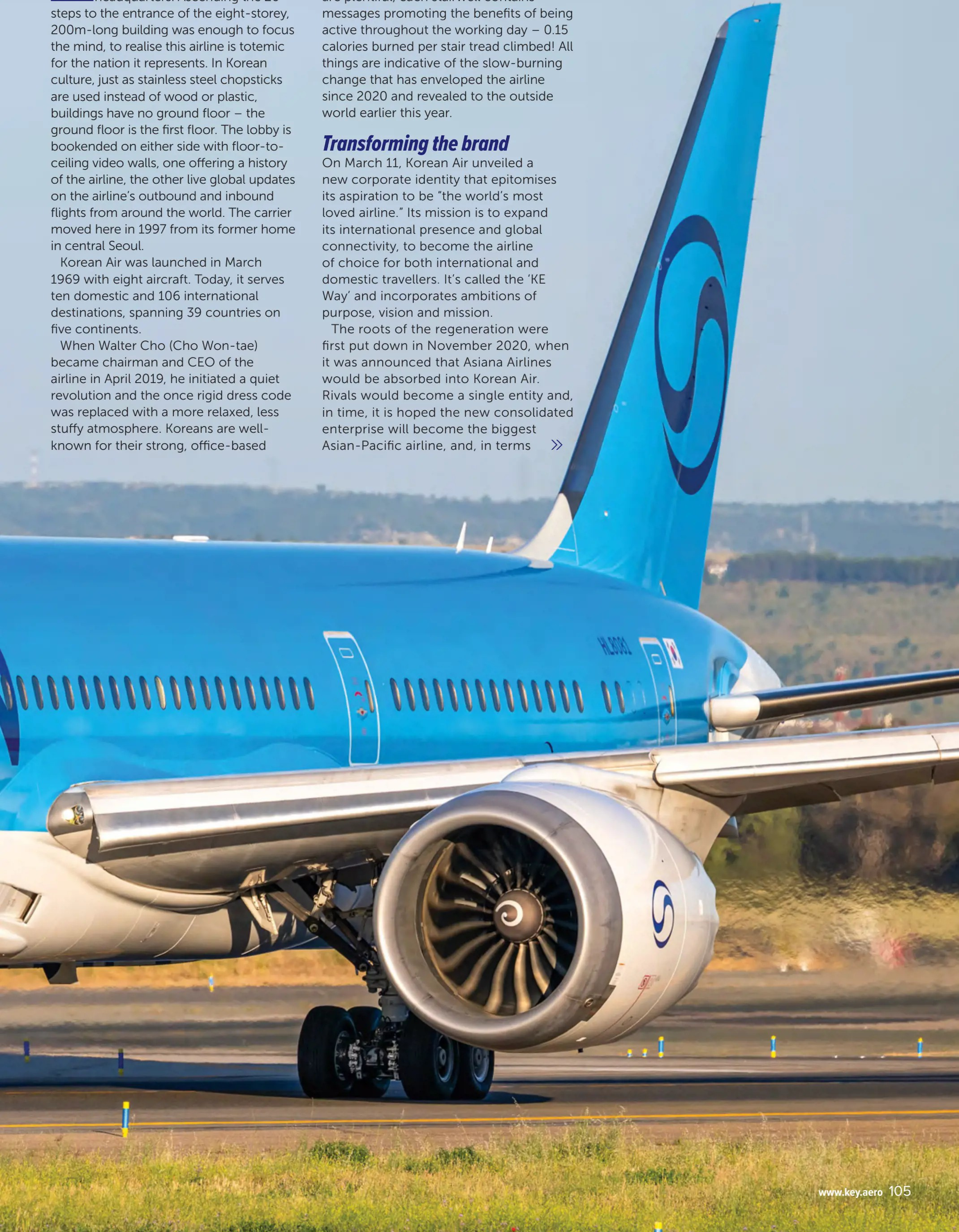


BELOW: ***Korean Air Boeing 787-9 Dreamliner, HL8081 (c/n 34810), was delivered to the airline in February 2017 and became one of the first aircraft to be seen in the new livery, captured here at Madrid/Barajas in June***
AIRTEAMIMAGES.COM/MOISES MENDOZA

ABOVE: ***Korean Air was launched in March 1969 with eight aircraft. Today, it serves ten domestic and 106 international destinations, spanning 39 countries on five continents*** KOREAN AIR

LEFT: ***The airline moved into its impressive Gimpo headquarters in May 1997*** KEY-ROBERT VEITCH

BELOW: ***Walter Cho (Cho Won-tae), Korean Air chairman and CEO, at the Rising Night event to launch the new corporate identity on March 11*** KOREAN AIR

When liveries go wrong

Sometimes, despite extensive timelines, vast levels of investment, the efforts of agencies and consultants and trips to the paint shop, a new idenity just doesn't work out. In June 1997, British Airways launched the World Tails livery with considerable fanfare, yet two years later with around 170 aircraft – half the fleet – repainted, BA bit the bullet and redecorated all its remaining aircraft in the Chatham Dockyard livery. With £60m squandered, World Tails was quietly abandoned in 2001 and, by the end of 2005, the last ugly duckling had re-emerged as a Chatham Dockyard swan.

KOREAN
KOREAN AIR

of international capacity, the 12th largest in the world.

After securing the necessary regulatory approvals around the world, despite some opposition, the acquisition was completed on December 12, 2024. Those approvals required the divestiture of some airport slots and the transfer of Asiana's cargo division to Air Incheon. Asiana now operates as a Korean Air subsidiary and, although back office integration is well under way, both will continue to operate independently until 2026, after which the Asiana brand will begin to fade as the new Korean corporate identify is extended across both airlines.

At its Gimpo headquarters, a spokesperson for the airline unravelled the road map to purpose, vision and mission. Purpose embraces an attitude of togetherness, encouraging global connectivity "for a better world", with a philanthropic mindset. The vision to be "the world's most loved airline", aims to secure a global reputation among travellers from diverse backgrounds and origins. The mission involves attention to detail, outstanding operational standards, enduring relationships, cultural exchange, leading in sustainability and in environmental, social and governance (ESG) issues. Two airlines becoming one was the trigger for a new identity, according to the spokesperson: "We're replacing two liveries, two identities. Nothing remains of either. It's a fresh start."

When it came to livery, the sky-blue-top look was enhanced with

ABOVE: ***Unveiling Korean Air Boeing 787-10 Dreamliner, HL8515 (c/n 66878), at the Rising Night event*** KOREAN AIR

the addition of mica (pearl) to create a metallic effect conveying a premium brand. The silver cheatline was replaced with "a smooth, flowing curve that sweeps across the fuselage, creating a more refined and contemporary look." The primary colours of the new corporate identity have been reduced to Korean light blue, Korean dark blue and white, with red for accents. The secondary palette "adds warmth to our visual system and echoes our cabin interiors", comprising off-white, beige, taupe and charcoal, with gold and silver foil. It was decided to change rather than replace the Taegeuk, as the symbol is "synonymous with Korean Air" and is now reimagined as a simpler, sleeker, flowing monochromatic blue. "The updated logo aligns with modern and global minimalist branding trends, while preserving the airline's distinct identity," the spokesperson explained.

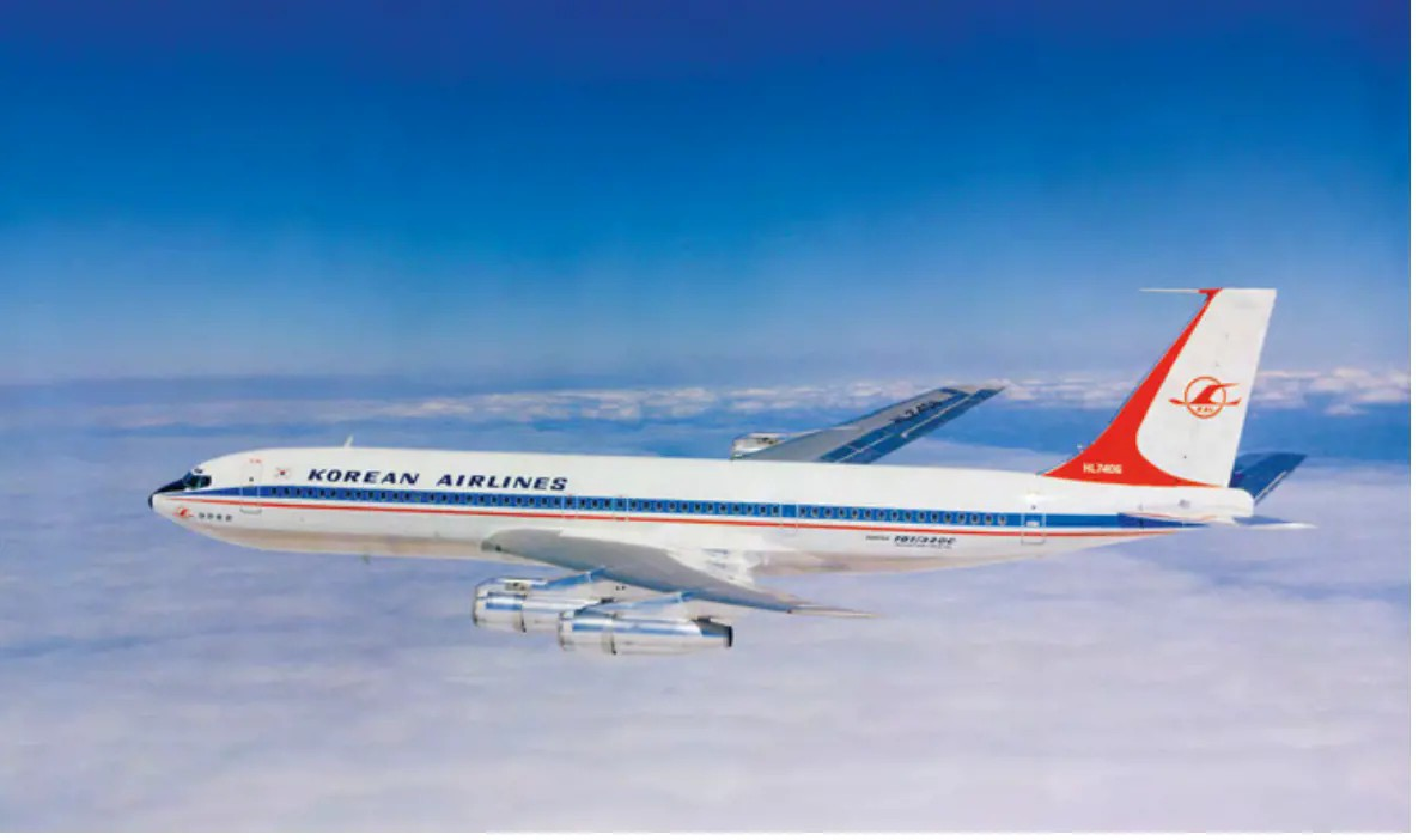
There was a desire to increase the size and simplify the logo, an intention for the new font to have "a modern interpretation of Korean elegance." The typeface Hanjin Group Sans comes in three weights: bold, regular and light. It features open joints and brushstroke terminals, and functions in both a Latin and Hangul alphabet, as the airline works in 13 languages around the world. The airline has simplified its name and kept it towards the front of the fuselage, in vogue with other airlines in getting it 'over the door'.

The depth of the rebrand is apparent in the detail at headquarters, where even the fire extinguisher labelling is in the new style. Airline icons retain the same design characteristics and help form a consistent brand image. So far, two aircraft have been delivered in the new livery and 20 repainted in it.

This new identity offers a similar level of change to 1984, when the airline last engaged in a major rebrand. Back then, the sky-blue-top livery replaced white as the primary colour, a bespoke Cooper Black font was used as the typeface, the cheatline was switched to silver and the 'pepsi' Taegeuk was introduced. In time it's become a modern classic, but updating a proven brand can be something of a challenge. American Airlines ditched the silver, United Airlines dispensed

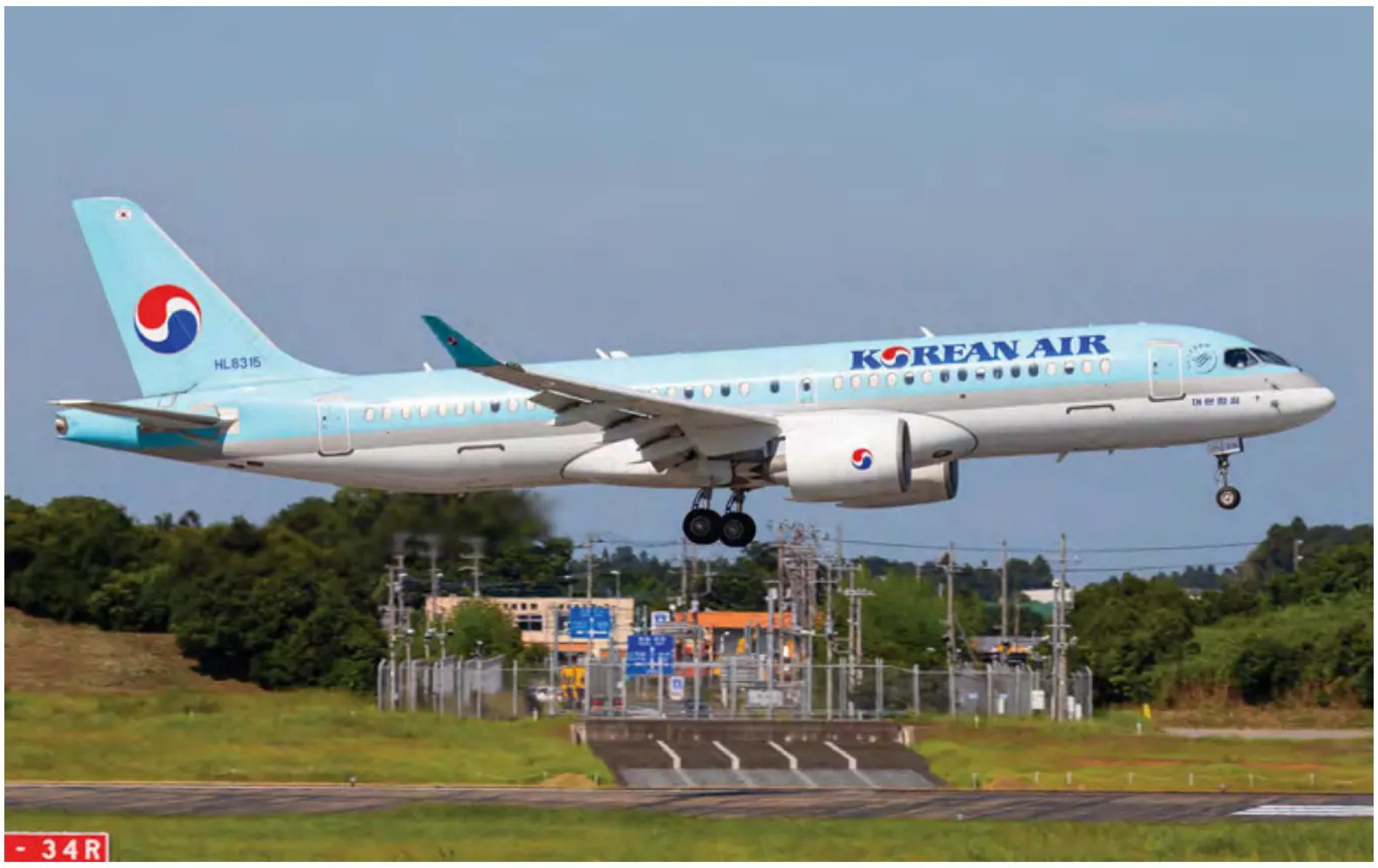
"The roots of the regeneration were first put down in November 2020 when it was announced that Asiana Airlines would be absorbed into Korean Air"

BELOW: ***HL8515 departing Seoul/ Incheon after the launch of the new corporate livery*** KOREAN AIR



LEFT: ***Korean Air Boeing 707-3B5C, HL7406 (c/n 20522), delivered in June 1971 and served with the carrier for 16 years*** KOREAN AIR

BELOW: ***Airbus A220-300, HL8315 (c/n 55037), wearing the 1984 sky-blue-top 'classic' livery. The airline hopes that, in time, the new livery will be viewed the same way*** AIRTEAMIMAGES.COM/ THEO SCHRÖCKER



The world's busiest route

The 280-mile Seoul/Gimpo-Jeju flight is, by almost every ranking, the busiest aviation route on the planet. During 2024, available seat capacity stood at 14,183,719, which averages at 38,859 per day. With around 180 daily flights on the air bridge, comprising mostly narrowbodies, each rotation carries 216 paying passengers. It's like waiting for a bus and having 179 others turn up one after the other.

with the tulip, Iberia's regal bands disappeared, Air India smartened up and Condor simply said "Hey, look at us!" All being well, a contemporary livery becomes the new gold standard, an updated interpretation of 'classic' for the here and now, with the predecessor retaining its place as a source of warm, fuzzy memories.

Showcasing the future

The launch of the new corporate identity on March 11 took place in the hangar at company headquarters at an event entitled Rising Night. Walter Cho shared his vision for the future: "Together, we will create a more connected and better world. With the complete integration of Asiana Airlines, our role as Korea's flagship carrier has become even more significant. We will combine our expertise, enhance our strengths and unite cultures to deliver an innovative, unparalleled airline experience."

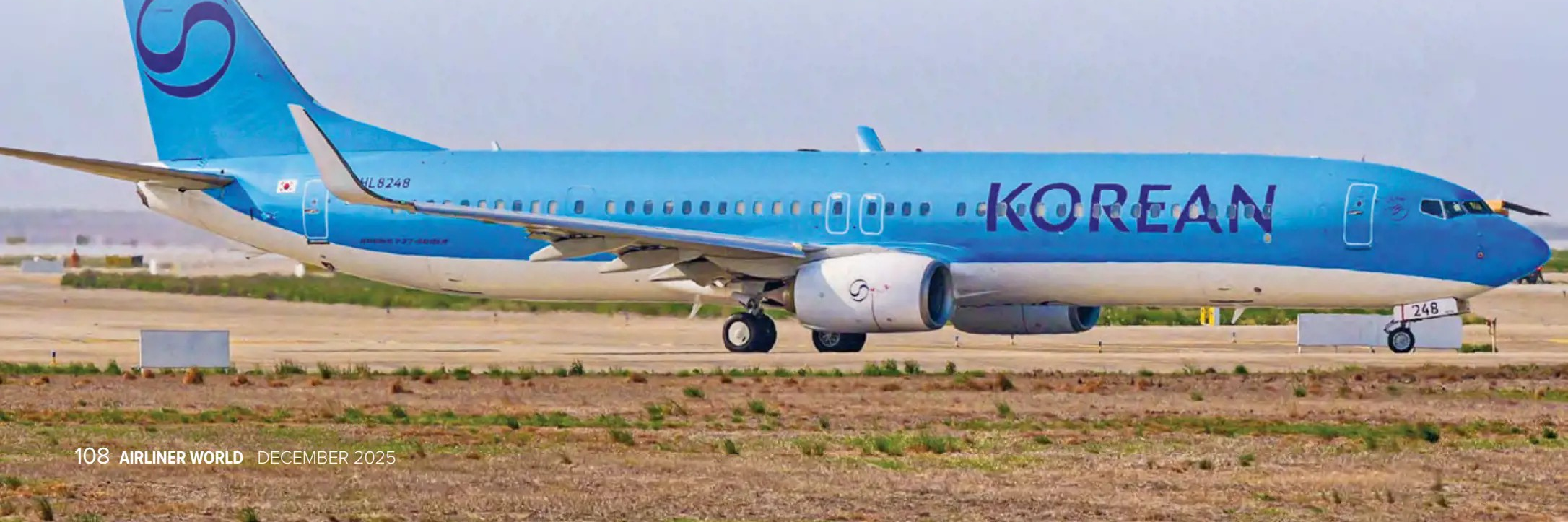
Around 1,000 invited guests witnessed the unveiling of the new colour scheme when the curtain was lifted and the spotlights turned on. Boeing 787-10 Dreamliner, HL8515 (c/n 66878), had been delivered factory-fresh from Seattle in July 2024, but barely eight months later it was offering a glimpse of the future. The aircraft also showcased the airline's latest Prestige Suites 2.0 cabin interiors, and the following day it flew the future into the air, departing Seoul/Incheon for Tokyo/Narita. "As a unified Korean Air, we are committed to more than just transportation – we aim to connect people, cultures and the world through the skies," said Cho.

Regarding South Korean opinion on the new livery, the spokesperson said: "Early feedback revealed a few startled reactions, but people are adjusting." In the flesh there's no doubting it's a statement rebrand, a step away from a well-loved 'classic'. The pearlescent shimmer of metallic blue is difficult to capture on film, though it's clear the aircraft have a fresh and vibrant sparkle. Comparisons with KLM, TUI and neos might be obvious, but they fade from the mind quite quickly. Korean Air offers smooth, clean, crisp lines and modern typography – it's a grower.

The rebrand extends to the amenity kits for First and Prestige Class passengers, created in conjunction with London jeweller Graff. Bedding is supplied by Monza-based Frette with a focus on superior quality. Tableware comes from Bernardaud, Riedel,

BELOW: ***As Airliner World went to press, 22 of the aircraft in the fleet were operating with the new livery, including Boeing 737-9B5ER, HL8248 (c/n 37635), seen here at Shanghai/Pudong*** AIRTEAMIMAGES.COM/ JAY LEE

> "We will combine our expertise, enhance our strengths and unite cultures to deliver an innovative, unparalleled airline experience"



ABOVE: ***Both Air Busan and Air Seoul will eventually be incorporated into Korean's low-cost subsidiary, Jin Air***
AIRTEAMIMAGES.COM/ANDREW HUNT

Christofle and Armani/Casa. A new crew uniform will also be revealed in due course.

In-flight menus have also been overhauled in a two-year quest for something simple, elegant and uncomplicated, allowing the flavours of the food to be expressed. It had been 16 years since Korean last revised its menu. David Pacey, executive vice president of in-flight service and lounges, said: "We realised we needed to change, and with our new corporate identity, it was time. We partnered with chef Seakyeong Kim from Cesta restaurant here in Seoul to develop our new menus with an overarching theme to be very authentic."

The new menu was initially launched on ten long-haul routes, before being expanded to all long-haul routes in June, then all routes in September. Highlighting Korean culinary heritage, it has also developed signature dishes such as nutritious octopus rice, beef brisket bibimbap, abalone rice and sinseollo (royal hot pot). The airline has said that "by featuring seasonal ingredients and innovative culinary techniques, these new dishes bring a gourmet experience to the skies."

From the top

The new combined Korean/Asiana identity will have a passenger fleet containing nine aircraft types, spread across 19 variants, although Cho has been clear in saying that as new aircraft are delivered older types such as the 747-8, A380 and A330 will eventually be retired. He has acknowledged the novelty factor with the 747s, noting some customers choose Korean just to fly the jumbos, which are popular on routes between Seoul and destinations such as Hong Kong, Los Angeles, Atlanta and summer

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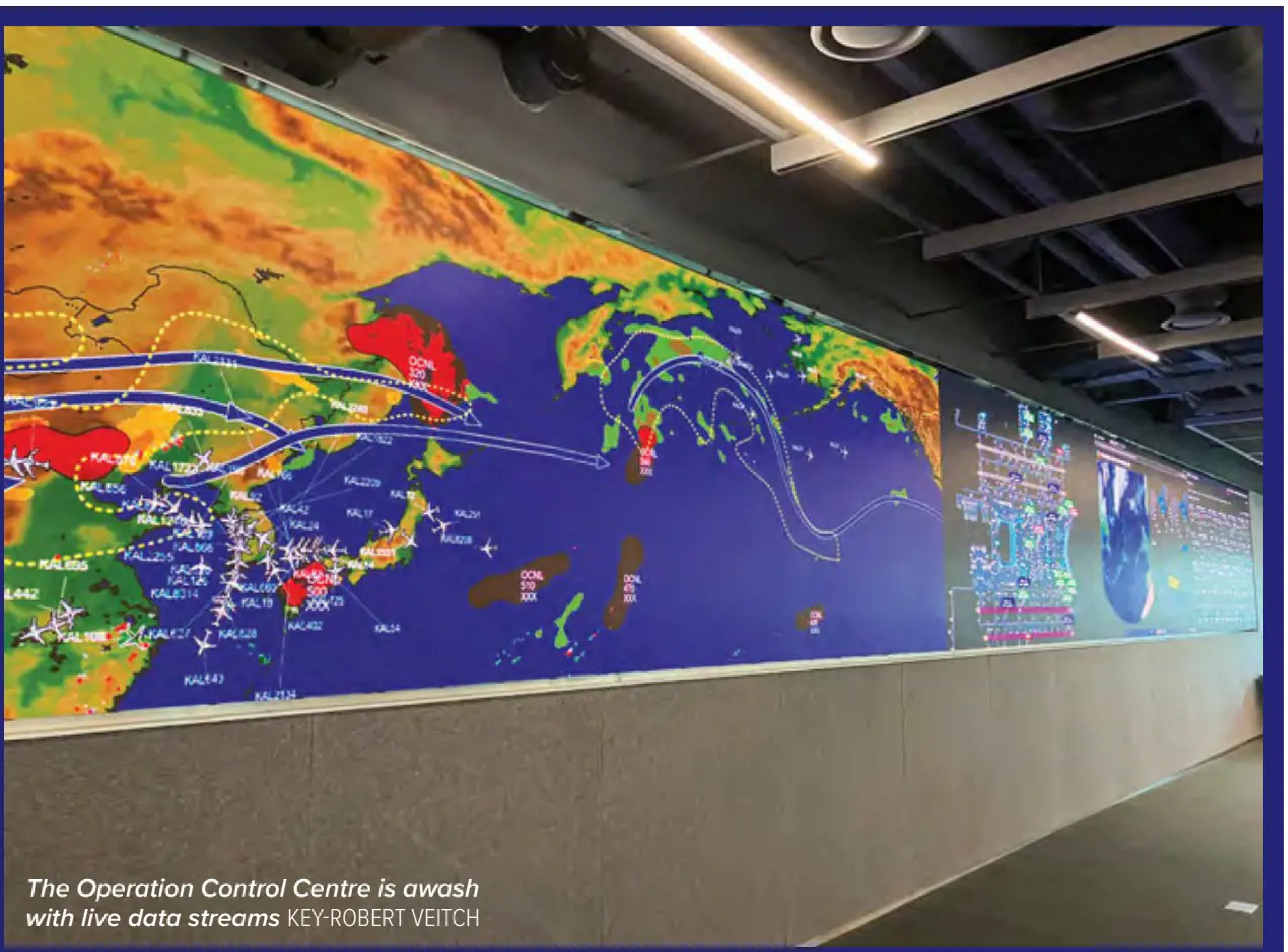
Aircraft	Korean	Asiana	Total
Airbus A220-300	10		10
Airbus A321-200		11	11
Airbus A321neo	17	13	30
Airbus A330-200	6		6
Airbus A330-300	18	14	32
Airbus A350-900	2	15	17
Airbus A380-800	6	6	12
Boeing 737-700	1		1
Boeing 737-800	2		2
Boeing 737-900	9		9
Boeing 737-900ER	6		6
Boeing 737 MAX 8	7		7
Boeing 747-400F	4		4
Boeing 747-8F	7		7
Boeing 747-8	5		5
Boeing 777-200		9	9
Boeing 777-300	4		4
Boeing 777-300ER	27		27
Boeing 777F	12		12
Boeing 787-8 Dreamliner	1		1
Boeing 787-9 Dreamliner	17		17
Boeing 787-10 Dreamliner	11		10
Total	**172**	**68**	**240**
Average age	11 years	10.3 years	

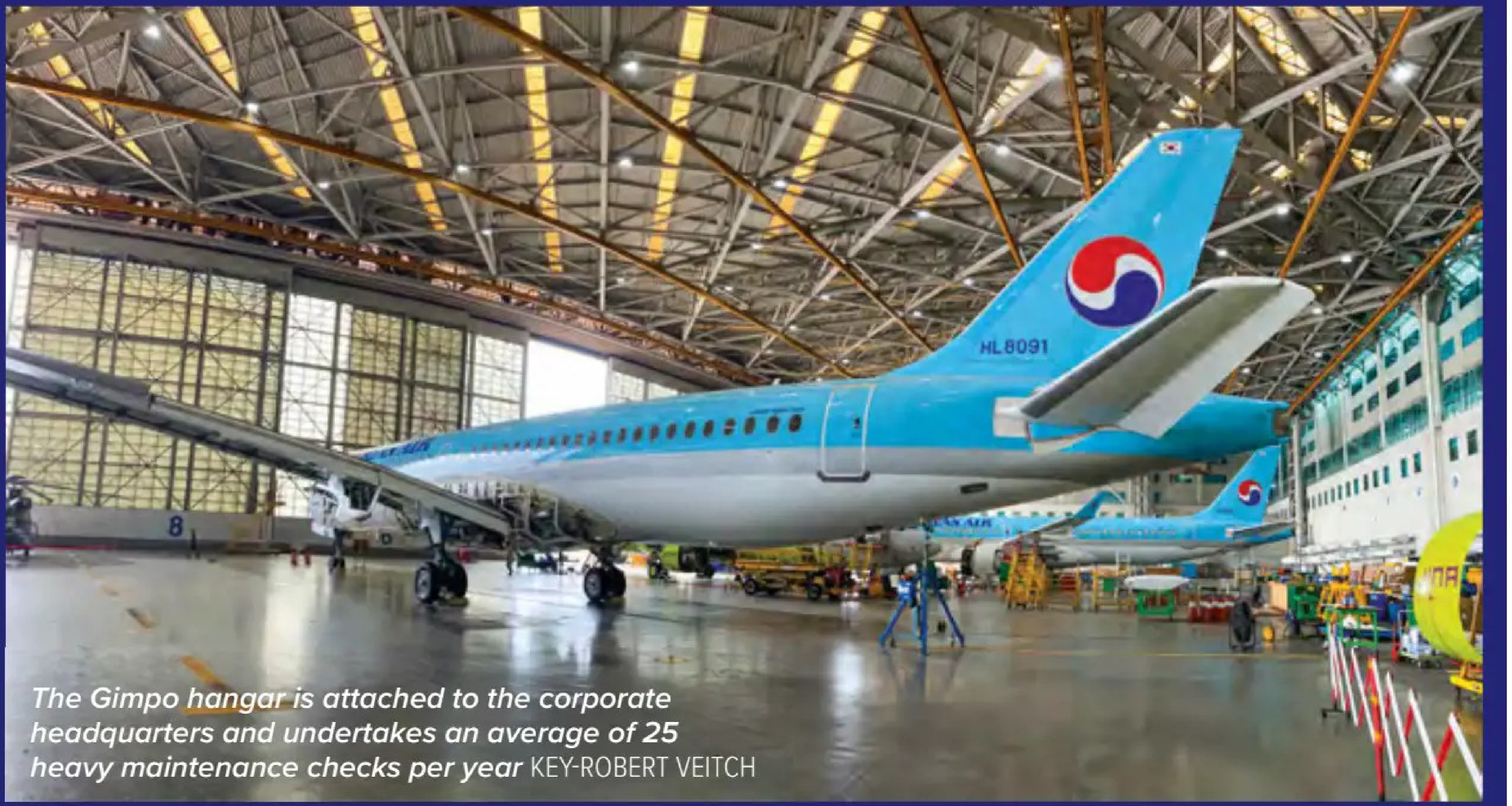
BELOW: ***The airline operates six Airbus A380s, including HL7615 (c/n 075), and the fleet will eventualy increase to 12 with the consolidation of the Asiana Airlines' fleet***
AIRTEAMIMAGES.COM/MATTHIEU DOUHAIRE

Over the years the airline has operated 69 Boeing 747s across five variants, including HL7644 (c/n 60411), which was delivered new in the 'classic' sky-blue-top livery in July 2017 VINCENZO PACE

Gimpo Calling



The Operation Control Centre is awash with live data streams KEY-ROBERT VEITCH



The Gimpo hangar is attached to the corporate headquarters and undertakes an average of 25 heavy maintenance checks per year KEY-ROBERT VEITCH

As well as being corporate headquarters, the facility is also home to other key Korean Air components. The **Aviation Health and Medical Centre** has been in operation since 1969 and occupies a 100m-deep wing of one floor. Its purpose is better employee health and wellbeing, with a focus on physical examinations, stress management, sleep care and mental health support for all employees, particularly flight and cabin crews. Staffed by 50 medical professionals including clinical psychologists, it offers a radiology department, electroencephalogram (EEG), an exercise zone, nutrition advice and an area dedicated to FAA pilot certification. It also operates as a 24/7 emergency call centre for flights, supplying first aid and emergency medical kits and defibrillators for aircraft.

On a separate floor, the **Operation Control Centre** (OCC) takes up another wing of headquarters. Its primary purpose is flight planning, tracking and operational safety. It also operates as a maintenance co-ordination centre (MCC), monitoring operational aircraft condition, offering technical support and scheduling overseas maintenance. Its third role is a load control centre (LCC), to ensure aircraft are correctly balanced in readiness for flight. Its final purpose is a network operations centre (NOC), co-ordinating flights and crews, and minimising passenger disruption. The OCC is a 24/7 decision-making platform that functions on a global scale for an airline operating around 425 daily flights. With 240 staff, communication, co-ordination and co-operation are key to its ability to perform successfully.

With a constant live data stream, the OCC makes constant adjustments, for example modifying flight plans to avoid disruptive weather or local conflicts. Staff work in distraction-free hushed tones, which promotes calm and clear thinking, so a conscientious competence pervades the entire space. A video wall shows live flight tracking, aircraft movements at Gimpo and Incheon airports, weather patterns and rolling news from around the world. Elsewhere, weight and balance dashboard screens show the live status of aircraft being loaded with freight and baggage, fuelling, boarding, and finally pushback.

It's fair to say that the list of company headquarters with an in-built **aircraft hangar** is probably a short one. At 180m in length, 85m in depth and 25m in height, Korean's 1997 construction offers 15,200m^2 of floor space and fits snugly between the two wings of the building. It offers simultaneous capacity for two Boeing 747s plus one narrowbody, or up to eight narrowbodies, and is primarily used by the airline, with some occasional third-party maintenance available on request. Over the past five years, it has undertaken an average of 25 heavy maintenance checks per year. While *Airliner World* was present, three aircraft were in for maintenance: a pair of Korean Air Airbus A220-300s – HL8312 (c/n 55028) and HL8091 (c/n 55049) – plus a Boeing 737-8SH, HL801 (c/n 42051), belonging to low-cost subsidiary Jin Air.

As well as the Gimpo hangar, Korean undertakes its MRO at Seoul/Incheon and Busan/Gimhae. A third at Bucheon will begin construction in 2027 and include a new flight training centre for the merged airline. The airline is also into the construction phase of a new engine test cell which is due to open in 2027. Located in Unbuk, close to Incheon and adjacent to the pre-existing 2016 facility, once operational it will increase in-house engine overhaul capacity from 100 to 360 powerplants annually.

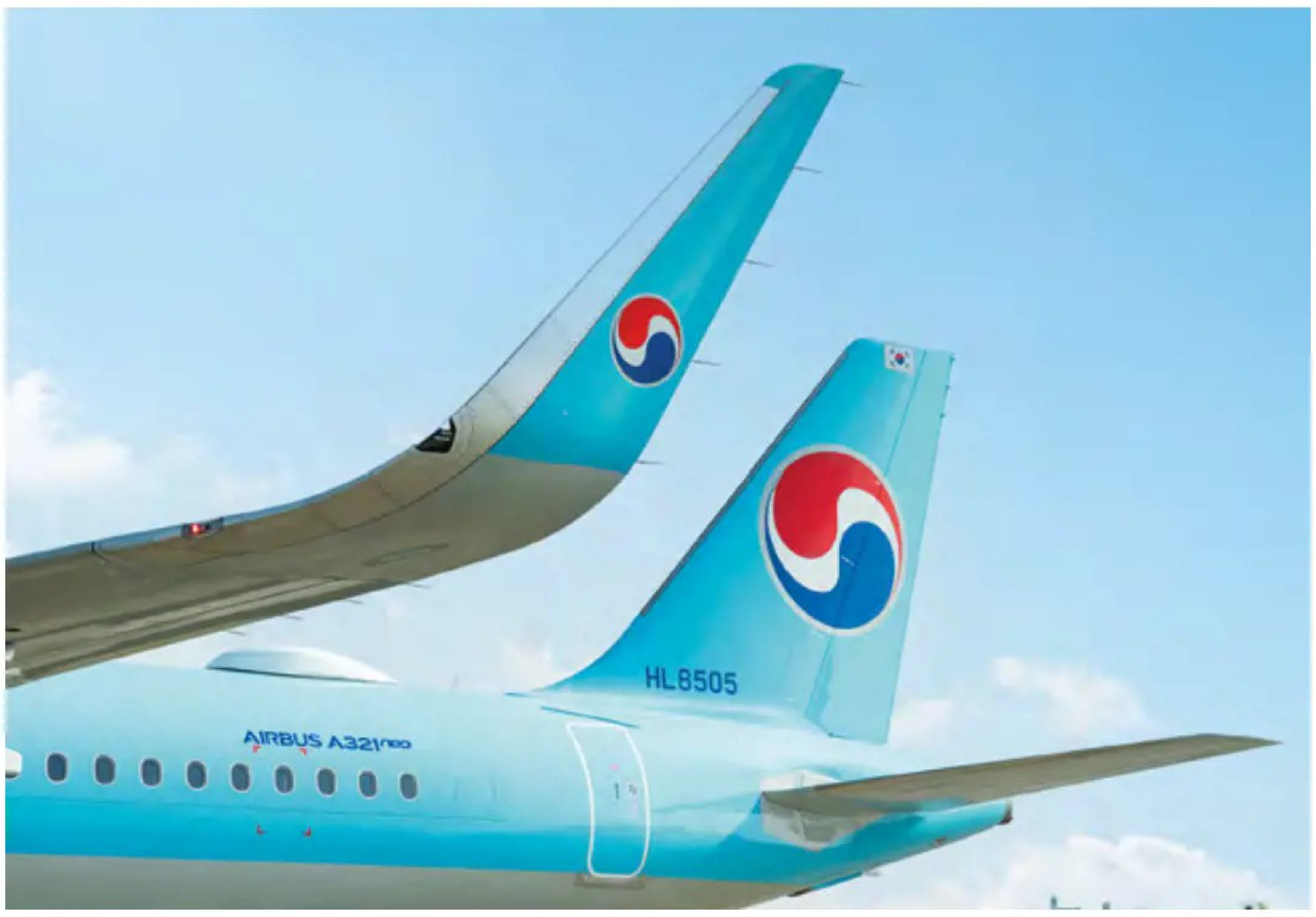
“It was decided to ‘change’ rather than ‘replace’ the Taegeuk, as the symbol is synonymous with the airline”

services to London. Plans for the 2025 retirement of the A380s and 2030 retirement of the 747s and have been put on ice for the time being, because delivery delays at Boeing and Airbus have left the airline with a deficit of around 20 aircraft per manufacturer.

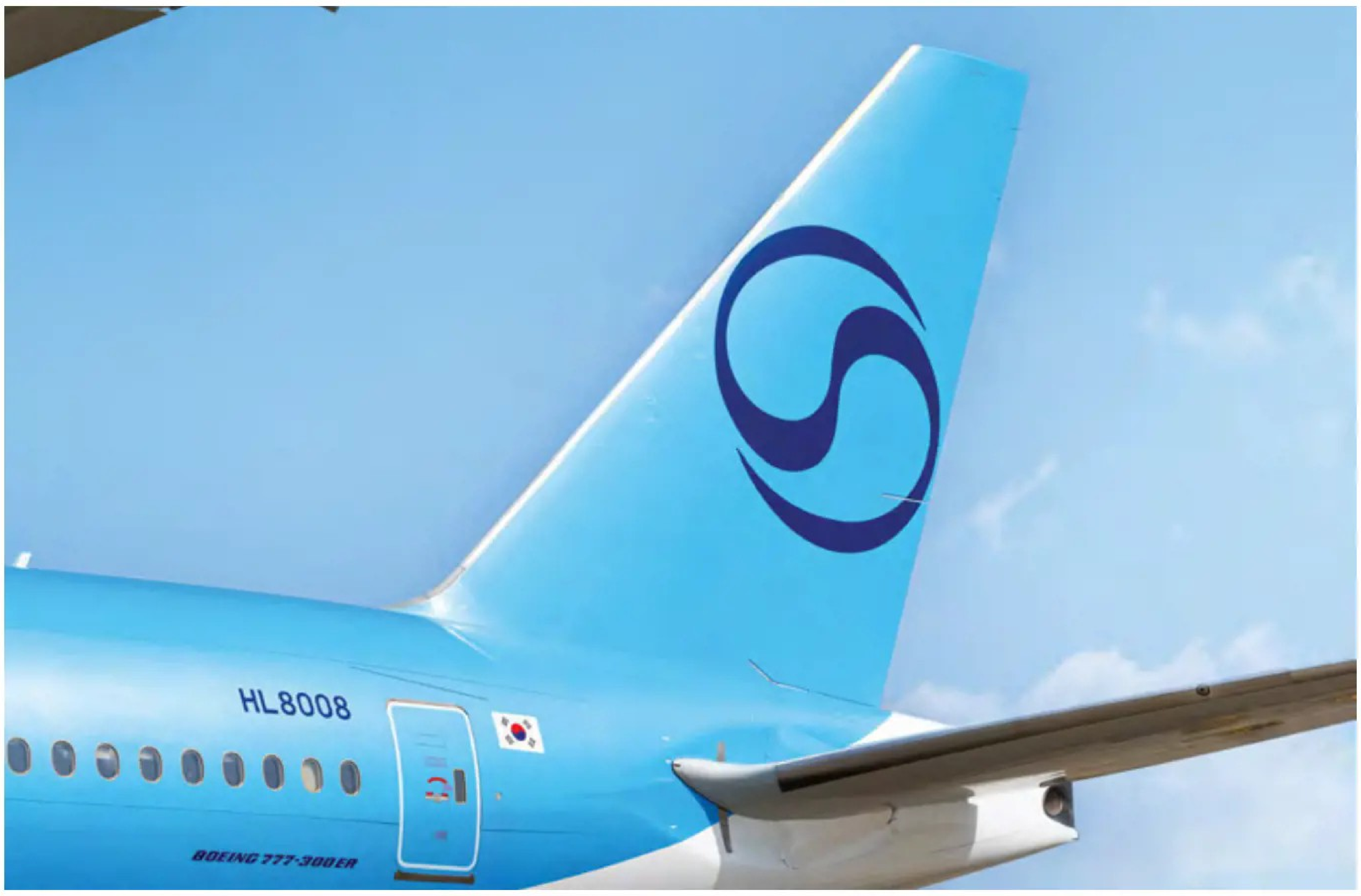
The airline received its first A350s in late 2024, from a redirected order originally slated for Asiana, as the merger neared completion. A350-941, HL8598 (c/n 689), arrived on December 27, with HL8597 (c/n 681) following three days later. Both aircraft are part of an order from March 2024 for six A350-900s and 27 of the larger -1000 variant, valued at $13.7bn. Deliveries of the first of its 40-strong 777-9 order are due to arrive from 2028 onwards – type certification dependant, of course.

In late August, in a $50bn spending spree, Korean agreed to purchase 103 Boeing aircraft and 19 spare engines. A $36.2bn deal with the American airframer includes 50 737 MAX 10s, 25 787-10s, 20 777-9s and eight 777-8Fs, with delivery through to the end of the 2030s. The move is expected to create long-term fleet simplification centred around the 737, 777, 787, Airbus A321neo and A350. It will also acquire 11 spare engines from GE Aerospace and eight from CFM International for a »

ABOVE: *Currently, Boeing 747-8B5, HL7638 (c/n 60408), is the only jumbo in the fleet to carry the new colours* AIRTEAMIMAGES.COM/ ALVIN MAN



RIGHT: *The Taegeuk was first introduced to the livery in 1984* KOREAN AIR



BELOW: *The Taegeuk has now been reimagined as a simpler, sleeker, flowing monochromatic blue* KOREAN AIR

“Boeing 787-10 Dreamliner, HL8515 (c/n 66878), had been delivered factory-fresh from Seattle in July 2024, but barely eight months later it was offering a glimpse of the future”

ASIANA AIRLINES
unicef
HL8308

ABOVE: *In years to come the Asiana colours will gradually disappear from aircraft like A350-941, HL8308 (c/n 218), as the new livery is applied* VINCENZO PACE

Flying the KE Way

Korean Air operates a premium check-in zone for First Class, Prestige, Million Miler, Morning Calm Premium and SkyTeam Elite Plus members across 16 desks in Zone A of Terminal 2 at Seoul/Incheon. Those flying the rarefied atmosphere of First Class can enjoy a lounge style process in one of eight booths, where staff come to the passenger. Check in at Heathrow Terminal 4 opens three hours prior to departure, so queueing times are usually reassuringly short and the staff overwhelmingly helpful. Boarding at both ends proved to be calm, efficient and quick. Once airborne, the cabin crew are quietly attentive without being overly fussy.

The Heathrow-Incheon route included two full meals in both directions. Depending on the travel class – *Airliner World* flew both economy and business – the food is plentiful, with choices to cover most, if not all, palates – the bibimbap comes highly recommended. Economy seats on a Boeing 777-300ER offer a 33-34in seat pitch, 18in width, winged headrest, recline facility, USB port and amenity kit. The range of video-on-demand is extensive, but for some of us the map and a window is enough. Business passengers (whose seating is described elsewhere in this article) can pre-select their menu via the website prior to departure.

Gochujang
KOREAN AIR
KOREAN AIR
SESAME OIL

On board, food is plentiful with choices to cover most, if not all, palates. The bibimbap (pictured) comes highly recommended KOREAN AIR

cool $690m, and has $13bn invested in a 20-year GE engine maintenance programme for 28 aircraft.

With such a complex current fleet structure, cabin standards can differ between aircraft. For example, a business class passenger on one 777 will experience the modern Prestige suite, while on another 777, the passenger will fly an older-generation seat and layout. Cho acknowledged this is being addressed: “That takes time, and our plan over the next five years is to standardise all those seats. We are already in the process of retrofitting our 777s, but the shortage of aircraft is causing delays because we don’t have enough planes to operate the routes. The new aircraft arriving in the next few years will all feature the new Prestige seats and we are also designing a new first-class.”

Gimme some Seoul

As the airlines continue to coalesce, Asiana will leave Star Alliance and Terminal 1 at Seoul/Incheon, to be rehomed with its new SkyTeam allies in Terminal 2. In the UK, it is likely to move into Heathrow Terminal 4 to be with Korean and the rest of the SkyTeam Alliance. Alongside the consolidation of Asiana into Korean, its low-cost subsidiaries – Air Busan (with five Airbus A320-200s, eight A321-200s and eight A321neos) and Air Seoul (six A321-200s) – will be incorporated into

ABOVE: ***Seoul is a friendly, dynamic city, blending tradition and modernity, offering a combination of ancient history and cutting-edge technology***
KEY-ROBERT VEITCH

Korean's low-cost outfit, Jin Air (27 Boeing 737s and four 777-200s).

In August, as an extension of its 2018 joint venture, Korean and its transpacific partner, Delta Air Lines, launched their international remote baggage screening (IRBS) service on the Seoul/Incheon-Atlanta/Hartsfield-Jackson route. With IRBS, checked-in baggage is X-ray screened in Korea, with the images securely transmitted to US Customs and Border Protection for remote review before arrival, eliminating the need for baggage collection and a second check-in for onward connections.

In September, Korean introduced a premium economy class on a newly retrofitted 777-300ER, on services to Singapore, bringing them in line with its latest aircraft interiors and onboard technology. The new cabin, a first for the airline, will replace first-class on the selected aircraft and features 40 seats in a 2-4-2 layout, offering around 50% more space than existing economy class seats. It is positioned between Prestige (business) and economy with the seat pitch varying between 39-41in, 19.5in wide, reclining to 130° and equipped with leg rests, footrests and ergonomic headrests. An enhanced IFE experience is offered with 15.6in 4K resolution screens. Passengers also benefit from access to Morning Calm check-in counters, priority baggage handling and Sky Priority boarding. The launch coincided with a complete interior overhaul of the airline's 27-strong 777-300ER fleet.

In October, the integration of both airlines' loyalty programmes moved a step closer. Although the Asiana Mileage scheme will remain active for another decade, customers can convert currency to Korean SKYPASS at any time in the next decade, before all remaining balances are automatically converted. In the meantime, Mileage rewards can be redeemed as normal, although after integration "all newly earned flight and partner miles will be credited exclusively as SKYPASS miles."

This autumn the airline has partnered with Boeing and Airbus in separate contracts to develop previous predictive maintenance agreements. The partnerships focus on advancing data-driven methodology to forecast component health. The aim is to enhance operational readiness, maximise aircraft availability and reduce maintenance costs and flight disruptions, ensuring the highest levels of fleet reliability.

London calling

At Terminal 2 at Seoul/Incheon, Korean operates an impressive seven lounges, in a terminal that opened in 2018. Sleek, modern and clean, it epitomises a forward-thinking country. It has recently added the Incheon Airport Guide to its Korean Air My app, offering passengers "seamless access to essential real-time information when traveling through Incheon International Airport."

Just prior to the launch of the new brand, Walter Cho spoke to airline employees via a worldwide livestream: "This rebranding initiative enhances our position as a leading global airline while bolstering trust with our customers and employees."

For sure, it's a bold move, a long time in planning and preparation, a statement change the airline can be proud of. Time and the response of passengers will be indicative of its success, but as my flight pushed back from gate 224, one thing was certain in my mind: I couldn't wait to fly the airline again. **AW**

The Taegeuk

The Taegeuk symbol is central to South Korean life and appears prominently on the country's national flag. It represents 'the supreme ultimate' and was adapted from the Taiji symbol for duality found in oriental philosophy, which is better known in the West as 'yin and yang'. In Korea, the Taegeuk is usually depicted as being red and blue, with the red section defining positive forces and the blue opposing forces; together they form a harmonious whole.

Many thanks to the hard working team at Korean Air for their help with this article

BELOW: ***Approaching Seoul/Incheon aboard Korean Air Boeing 777-3B5ER, HL8217 (c/n 37648)***
KEY-ROBERT VEITCH

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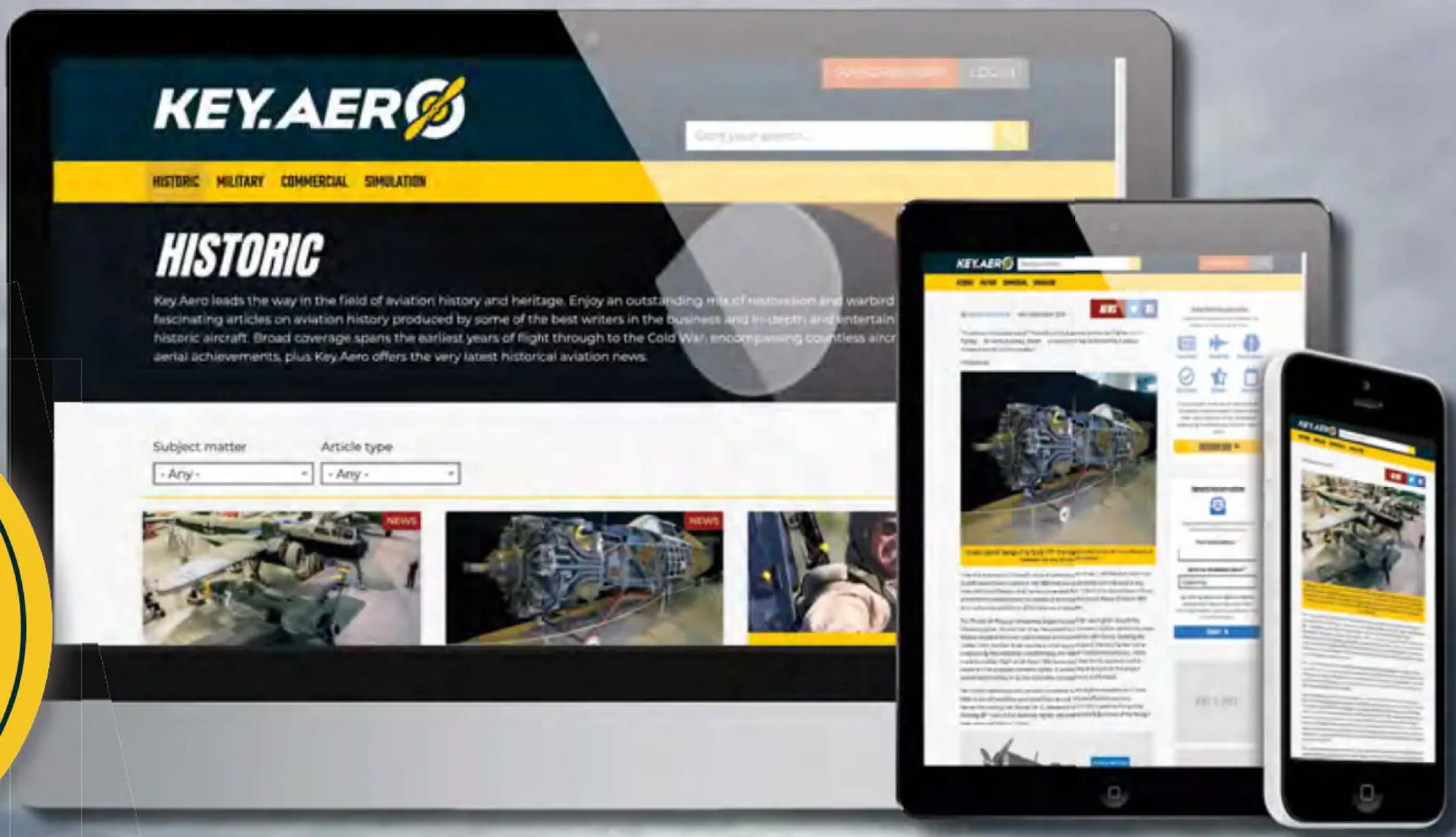
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